verizon

jetpack™

User Guide

MiFi® 5510L

90026642 - R1

4G LTE

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Part Number	Revision	Description	Date
90026642	R1	Initial release	18 Jan 2013

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Please visit www.novatelwireless.com for the latest information about your device.

Contents

Getting Started 1

Overview 2
- Features 2
- Package Contents 2
- System Requirements 3

Components 4
- Status Indicators 5

Power Management 7

Caring for Your Device 8

Using Your Jetpack 9

Accessing the Network 10

Using Your Jetpack for the First Time 11
- Install the 4G LTE SIM Card 12
- Remove the 4G LTE SIM Card 13
- Insert and Charge the Battery 14
- Remove the Battery 15
- Battery Tips 16
- Power the Jetpack On and Off 17
  - Power On 17
  - Power Off 17

Connecting to Your Jetpack 18

Using Your Jetpack After Setup is Complete 19
- Using the Device User Interface 22

Jetpack Settings 23

Managing Your Jetpack 24
- On the Jetpack Device 24
- On the Jetpack Web Interface 25
- Sign In 26
  - Sign In 27
  - Menu Panel 27

My Jetpack Home 28
- On the Jetpack Device 28
- On the Jetpack Web Interface 29
  - Manage My Jetpack 30
  - My Account & Tools 34
  - Help & Support 35

Data Usage 36
- On the Jetpack Device 36
- On the Jetpack Web Interface 37

Connected Devices 38
On the Jetpack Device 38
On the Jetpack Web Interface 39
Connected Devices 40
Blocked Devices 43
Jetpack Settings 45
On the Jetpack Device 45
Mobile Network 45
Software Update 46
On the Jetpack Web Interface 47
Jetpack 47
Wi-Fi 52
Advanced 54
Messages 62
On the Jetpack Device 62
On the Jetpack Web Interface 63
About Jetpack 65
On the Jetpack Device 65
On the Jetpack Web Interface 66
Internet Status 66
Jetpack Info 68
Diagnostics 69
Logs 73
Jetpack Support 75

Troubleshooting 77
Overview 78
Common Problems and Solutions 79
Technical Support 81
Technical Support 81

Product Specifications and Regulatory Information 82
Product Specifications 83
General 83
Technology/Bands 83
Environmental 83
Regulatory Statements 84
Wireless Communications 86
Limited Warranty and Liability 86
Safety Hazards 87
Proper Battery Use and Disposal 89

Glossary 90

1

Getting Started

Overview
Components
Power Management
Caring for Your Device

Overview

Congratulations on your purchase of the Verizon Jetpack™ 4G LTE Mobile Hotspot MiFi® 5510L !

With the Jetpack Mobile Hotspot you can access 4G LTE networks for faster apps, uploads and downloads. Connect up to ten Wi-Fi enabled devices to the Internet at once - laptops, tablets, e-readers, gaming consoles and more* - and experience download speeds of up to 100 Mbps**.

The Jetpack is backwards compatible to 3G networks, ensuring reliable connectivity when you need it most.

System Requirements

- Compatible with all major operating systems
- Works with the latest versions of browsers, including Android™, Chrome™, Firefox®, Internet Explorer®, Safari™ and Mobile Safari™

To use Wi-Fi mode, your computer needs Wi-Fi capability and Internet browser software only.

Your Jetpack must have proper data service to function properly. (See Using Your Jetpack for the First Time on page 10.)

* When multiple users are connected to the Jetpack, all of their data usage will be aggregated and applied to the mobile broadband customer.

** Manufacturer's rated peak theoretical speed. Actual speeds may vary.

Components

1. **Scroll Left/Right** — Scrolls left or right through available menu options.
2. **Charging Port —** The wall charger connects here.
3. **Select Button —** Use to select a menu option.
4. **Status Display —** Provides connection and battery status, network signal strength, roaming status, and the number of users connected with Wi-Fi.
5. **Power Button —** Powers the Jetpack on and off.
6. **Red Lighting Effect —** Illuminates when display is on and when Jetpack is charging.

1. **SIM Card Slot —** The SIM card is installed here.
2. **Battery Compartment** — The battery contacts connect here.
3. **Master Reset Button** — Insert a paperclip in the small hole to reset the Jetpack to factory settings. (See How do I reset the Jetpack back to factory settings? on page 78.)
4. **Battery Removal Divot** — When the battery is installed, insert a fingernail here and lift to easily remove it.

Status Indicators

DISPLAY ICON		DESCRIPTION
No icons		The Jetpack is powered off or not receiving power, or the screen is in power-saving mode
Status Bar		
Connected Devices		Scroll and select the icon to display the number and IP address of connected devices .
Messages		Scroll and select the icon to display the number of unread SMS messages.
Network Signal Strength		More bars indicate more signal strength.
Battery		More white on the battery indicates more battery life.
Activity Indicator		If this icon is displayed, data is being transferred between your Jetpack and connected device(s).
Next to Network Name		
Extended Network		If this icon is displayed, your Jetpack is connected over an extended network.
Roaming		If this icon is displayed, your Jetpack is roaming.
Carousel		
Connected Devices		Scroll and select the icon to display the number and IP address of connected devices .
Messages		Scroll and select the icon to display the number of unread SMS messages.
Mobile Network		Scroll and select the icon to display the technology, network operator, signal and preferred network.

Software Update		Scroll and select the icon to display the current software version, date and time of last check for updates and to check for current software updates.
About Jetpack		Scroll and select the icon to display the mobile number, model number, IMEI, URL and Admin Password for your Jetpack.
Home		Scroll and select the icon to return to the Jetpack Home page and to access menu options.
Data Usage		Scroll and select the icon to view the amount of data used in the current billing period.
Wi-Fi Name/Password		Scroll and select the icon to display the Wi-Fi name, password and URL.

Power Management

Your Jetpack will work from its battery or when plugged into a power source.

- **Battery** — Charge the battery by plugging in the wall charger. While the battery is charging the battery icon bars blink. When the battery is fully charged, the battery icon is solid.
- **USB wall charger** — You can use the Jetpack when the charger is plugged into a wall socket. Please ensure the wall socket is located near the equipment and is easily accessible. The MiFi battery charges while it is plugged into the charger.

Before using the Jetpack, read the battery safety information in the "Safety Hazards" section of this guide. (See Proper Battery Use and Disposal on page 88.)

Caring for Your Device

Like any electronic device, the Jetpack must be handled with care to ensure reliable operation. Novatel Wireless recommends the following guidelines:

- Protect the Jetpack from liquids, dust, and excessive temperatures.
- Do not apply adhesive labels to the Jetpack; they might cause the Jetpack to potentially overheat and they might alter the performance of the antenna.
- Store the Jetpack in a safe place when not in use.

2

Using Your Jetpack

Accessing the Network
Using Your Jetpack for the First Time
Connecting to Your Jetpack
Using Your Jetpack After Setup is Complete

4G LTE

With LTE bandwidth (700 MHz) you can get the broadband-like speed you require to work efficiently outside the home or office. You can connect to the Internet, access your corporate intranet, check your email and download attachments at speeds that are up to 10 times faster than 3G*.

4G Mobile Broadband with LTE*

- Download: typical download speeds of 5-12 Mbps.
- Upload: typical upload speeds of 2-5 Mbps.

3G Mobile Broadband with EVDO Rev. A**

- Download: typical download speeds of 600 kbps–1.4 Mbps with bursts up to 3.1 Mbps.
- Upload: typical upload speeds of 500-800 kbps with bursts up to 1.8 Mbps.

Wi-Fi 802.11b/g/n

- 802.11b uses the 2.4 GHz frequency with a bandwidth of 11 Mbps.
- 802.11g uses the 2.4 GHz frequency with a bandwidth of 54 Mbps.
- 802.11n uses the 2.4 GHz frequency with a bandwidth of 150 Mbps.

* Speeds shown are those published by Verizon Wireless, Inc. and are theoretical in nature. Actual throughput speed and coverage may vary. Speed claims not applicable when roaming.

** Mobile Broadband Rev.A speed claim based on Verizon Wireless network tests with 5 MB FTP data files without compression. Your Mobile Broadband Rev. A-enabled Jetpack will indicate coverage when you are in a Mobile Broadband Rev. A service area. When outside the Rev. A service area, your wireless Jetpack will revert to Mobile Broadband Rev. 0 (typical download speeds will be 400–700 Kbps and upload speeds will be 60–80 Kbps).

Using Your Jetpack for the First Time

To get started, follow these steps:

1. Confirm your computer meets the minimum system requirements. (See System Requirements on page 3.)
2. Install the 4G LTE SIM card. (See Install the 4G LTE SIM Card on page 11.)
3. Insert and charge the battery. (See Insert and Charge the Battery on page 13.)
4. Turn on the Jetpack. (See on page 15.)
5. Connect the Jetpack to your computer using Wi-Fi. (See Connecting to Your Jetpack on page 17.)
6. Connect to Jetpack Settings. (See Connecting to Your Jetpack on page 17.)

Install the 4G LTE SIM Card

Your SIM (Subscriber Identity Module) card is a small rectangular plastic card that stores your phone number and important information about your wireless service.

To install your new 4G LTE SIM card if it is not pre-installed, follow these steps:

1. Remove the battery door cover located on the underside of the Jetpack.
2. If necessary, remove the SIM card from the outer card, being careful not to touch the gold-colored contacts.
3. Lift the SIM card removal hinge and move out of the way.
4. Hold the card with the Verizon logo facing up and gold-colored contact points facing down.
5. Insert the SIM card into the slot and replace the SIM card removal hinge, securing it in place. The 4G SIM card MUST remain in the SIM card slot when in use.

CAUTION! Do not bend or scratch your SIM card. Avoid exposing your SIM card to static electricity, water, or dirt.

Remove the 4G LTE SIM Card

To remove the 4G LTE SIM card, follow these steps:

1. Remove the battery door cover located on the underside of the Jetpack.
2. Remove the battery from the back of the Jetpack by inserting your fingernail into the battery removal divot and lifting the battery out of the battery compartment.

3. Lift the SIM card removal hinge and move out of the way.
4. Place your forefinger on the SIM Card and carefully slide the SIM Card backwards to remove.
5. Replace the SIM card removal hinge and snap into place.

NOTE Should your 4G SIM card be lost or damaged, contact your network operator.

Insert and Charge the Battery

IMPORTANT Before you use your Jetpack, be sure to charge the battery for at least 3.5 hours to ensure a full initial charge.

To insert and charge the battery, follow these steps:

❶ Press your finger against the battery door removal tab, then lift and remove the battery door cover.

❷ Align the gold-colored contacts on the battery with the gold-colored contacts on the Jetpack and gently slide the battery into place.

❸ Replace the cover by setting it on the Jetpack where the notches align, then press on the cover until it clicks into place and is flat across the entire bottom surface.

❹ Connect the micro USB end of the charger into the charging port of the Jetpack.

❺ Plug the other end of the wall charger into the appropriate electrical outlet.

CAUTION! Use only batteries and chargers with your Jetpack that have been approved by Verizon Wireless. The failure to use approved batteries and chargers may increase the risk that your Jetpack will overheat, catch fire, or explode, resulting in serious bodily injury, death, or property damage.

You are now ready to connect your computer or other Wi-Fi device to the Jetpack.

Remove the Battery

To remove or replace the battery, follow these steps:

❶ Press your finger against the battery door removal tab, then lift and remove the battery door cover. Set the cover aside.

❷ Insert your finger into the battery removal divot and lift the battery out of the battery compartment.

Battery Tips

WARNING! Always use only approved batteries and chargers with your Jetpack. The warranty does not cover damage caused by non-approved batteries and/or chargers.

- It normally takes at least three hours to fully charge the battery with the wall charger.
- Do not use sharp objects to access the battery well, this may damage the Jetpack and the battery.
- Do not use excessive force to remove the battery or to access the battery well.
- The battery discharges more rapidly as additional devices access your Jetpack.
- Battery life depends on the network, signal strength, temperature, features, and accessories you use.
- New batteries or batteries stored for a long time may take more time to charge.
- When charging your battery, keep it near room temperature.
- When storing your battery, keep it uncharged in a cool, dark, dry place.
- Never expose batteries to temperatures below -20°C (4°F) or above 60°C (140°F).
- Never leave the Jetpack in an unattended vehicle due to uncontrollable temperatures that may be outside the desired temperature for this Jetpack.
- Some batteries perform best after several full charge/discharge cycles.
- It is normal for batteries to gradually wear down and require longer charging times. If you notice a change in your battery life, it is probably time to purchase a new battery.

IMPORTANT Whenever you remove or insert either the battery or the SIM card, ensure your MiFi Jetpack is not connected to any device or power source. Never use tools, knives, keys, pens or any type of object to force the door open or to remove the battery. Using any of these types of objects could result in puncturing the battery.

WARNING! The failure to use approved batteries and chargers may increase the risk that your Jetpack will overheat, catch fire, or explode, resulting in serious bodily injury, death, or property damage. To avoid risk of explosion, never dispose of batteries in a fire.

Power the Jetpack On and Off

Power On

- Press the Power Button until the Jetpack display lights up. After the initial startup screens display, select **Menu** to access the menu.

Power Off

- Press and hold the Power Button until the display shows **MiFi Powering Off**. The Jetpack will continue its shutdown procedures for several seconds and then automatically turn off the display.

Connecting to Your Jetpack

Now you can connect your Wi-Fi enabled device to your Jetpack using Wi-Fi. Your computer, tablet, or other Wi-Fi enabled devices need Wi-Fi capability and Internet browser software. Your Jetpack is compatible with all major operating systems, and works with the latest version of browsers, including Android™, Chrome™, Firefox®, Internet Explorer®, Safari™ and Mobile Safari™. Your default Wi-Fi Name (SSID) and Wi-Fi Password can be found on the Jetpack display upon initial power up.

To access your Wi-Fi Name (SSID) and Wi-Fi Password after the initial power up or a device reset:

1. Power on your Jetpack.
2. Select **Menu** and open the Wi-Fi Name and Password option.
3. Select **Open** to display the Wi-Fi Name/Password.

To connect to your Jetpack:

1. Turn on your Wi-Fi enabled device and turn on your Jetpack using the power button. The Jetpack display will light up. The Jetpack broadcasts its own wireless network.
2. Open the Wi-Fi application or controls on the computer or Wi-Fi enabled device that you want to connect to your Jetpack and find the Jetpack's SSID.

Tip! The steps to connect to a Wi-Fi network vary depending on your operating system and whether you use the native application or third-party software. Generally, you click an icon in the Windows notification area where you can select **View Available Wireless Networks,** or click the Airport icon in the menu bar on a Mac. If you are unfamiliar with wireless networking on your computer, consult the computer help system.

3. When prompted, enter your Wi-Fi password, which can be found on the Jetpack display by pressing the Select button (Menu) on the Home screen to display the Wi-Fi icon, then pressing the **Select** button (Open) to display the Wi-Fi Name/Password screen. The Jetpack screen should now show an additional connected device. Your Wi-Fi enabled device is now connected to the Internet.
4. You can view or change Jetpack settings by connecting to the Jetpack web user interface at http://192.168.1.1.

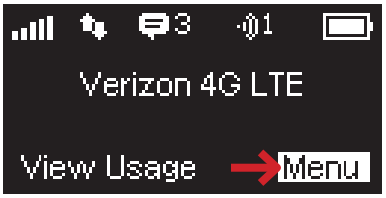
IMPORTANT Charge the battery completely before you connect your computer to your MiFi Jetpack. (See Insert and Charge the Battery on page 13.)

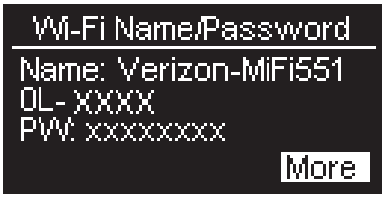
Using Your Jetpack After Setup is Complete

You can use the Jetpack as a wireless mobile hotspot to connect your computer and up to a total of 10 (on 4G LTE) Wi-Fi enabled devices to the mobile broadband network. The Jetpack is powered on as soon as you press and hold the power button and the display turns on.

To find the name of the Wi-Fi network (SSID) name and Wi-Fi password on the Jetpack screen:

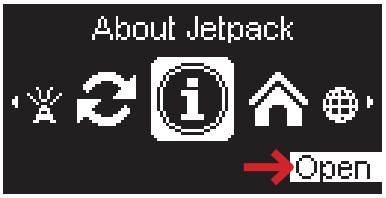
1. Select **Menu** and open the Wi-Fi Name/Password option.
2. Select **Open** to display the Wi-Fi Name/Password.

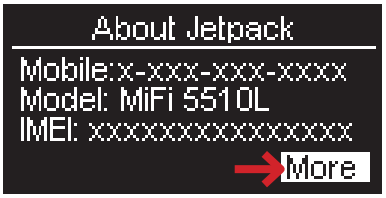




The Jetpack comes from the factory with security enabled. You can change the security settings using the Jetpack Web User Interface. To change your Jetpack security settings:

1. Open your web browser and enter **http://my.jetpack** or **http://192.168.1.1.**
2. Login with the Jetpack Admin Password which can be found on the Jetpack screen by selecting **Menu > About Jetpack > Open > More > More**.

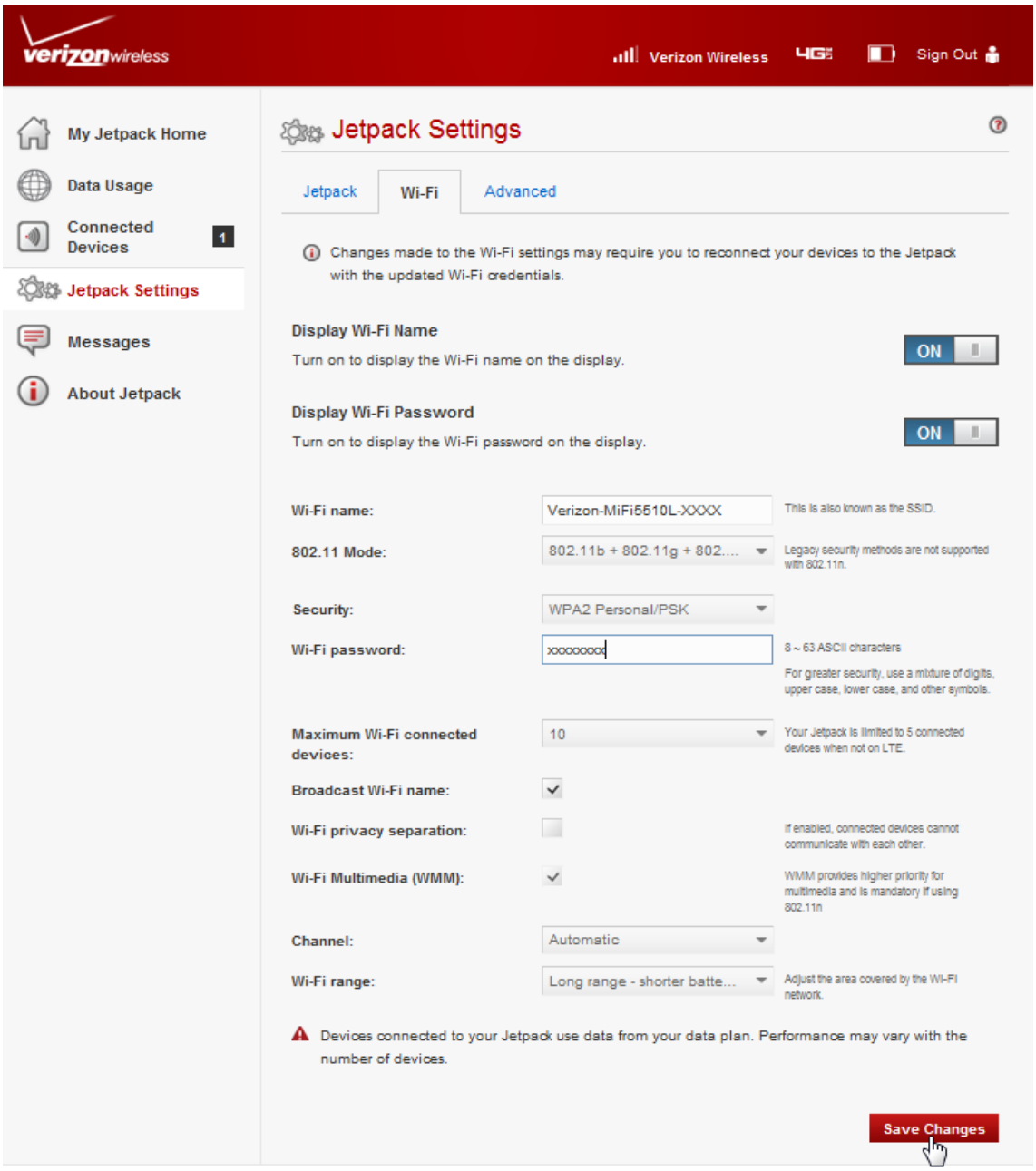




❸ To change your Wi-Fi Name/Password, from My Jetpack Home select **Manage My Jetpack > Customize my Wi-Fi Settings**.

❹ Enter the new Wi-Fi Name in the Wi-Fi name field and the new Wi-Fi Password in the Wi-Fi password field.

❺ Click **Save Changes**.

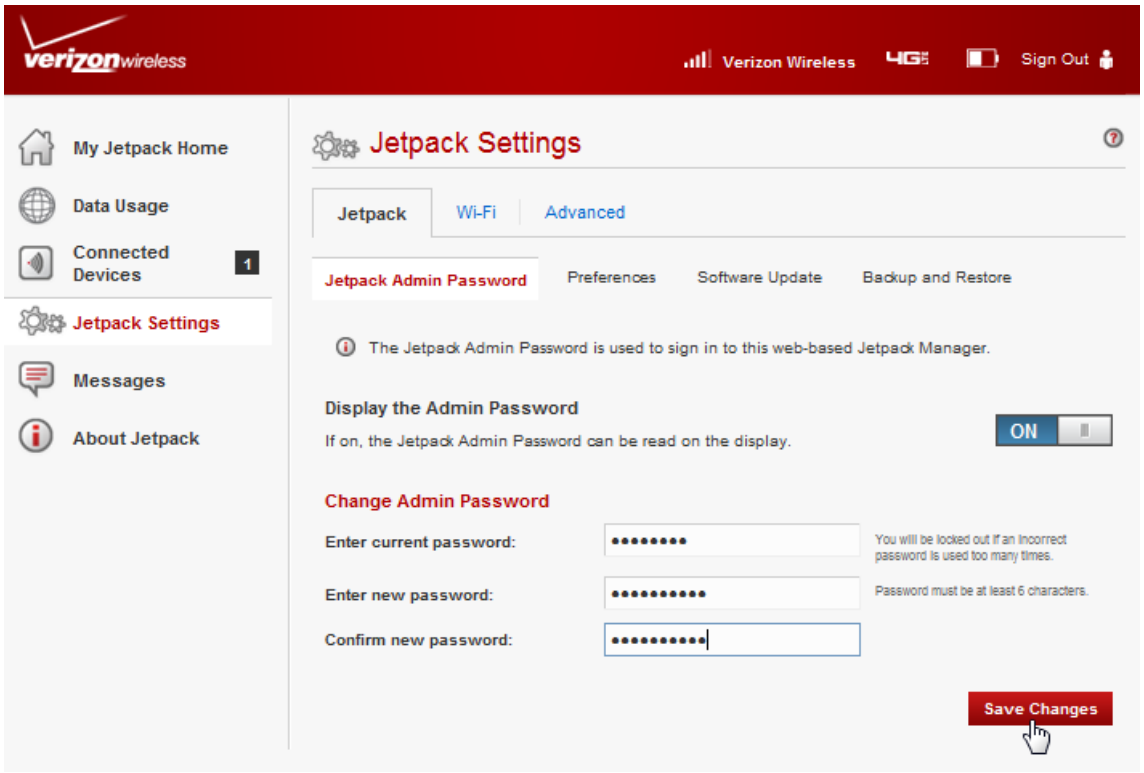

verizonwireless
Verizon Wireless
4G
Sign Out
My Jetpack Home
Data Usage
Connected Devices
1
Jetpack Settings
Messages
About Jetpack
Jetpack Settings
Jetpack
Wi-Fi
Advanced
Changes made to the Wi-Fi settings may require you to reconnect your devices to the Jetpack with the updated Wi-Fi credentials.
Display Wi-Fi Name
Turn on to display the Wi-Fi name on the display.
ON
Display Wi-Fi Password
Turn on to display the Wi-Fi password on the display.
ON
Wi-Fi name:
Verizon-MiFi5510L-XXXX
This is also known as the SSID.
802.11 Mode:
802.11b + 802.11g + 802....
Legacy security methods are not supported with 802.11n.
Security:
WPA2 Personal/PSK
Wi-Fi password:
xxxxxxxx
8 ~ 63 ASCII characters
For greater security, use a mixture of digits, upper case, lower case, and other symbols.
Maximum Wi-Fi connected devices:
10
Your Jetpack is limited to 5 connected devices when not on LTE.
Broadcast Wi-Fi name:
Wi-Fi privacy separation:
If enabled, connected devices cannot communicate with each other.
Wi-Fi Multimedia (WMM):
WMM provides higher priority for multimedia and is mandatory if using 802.11n
Channel:
Automatic
Wi-Fi range:
Long range - shorter batte...
Adjust the area covered by the Wi-Fi network.
Devices connected to your Jetpack use data from your data plan. Performance may vary with the number of devices.
Save Changes

❻ To change your Admin Password, from My Jetpack Home, select **Manage My Jetpack > Change my Jetpack Admin Password**.

❼ Enter your current Admin Password in the Enter current password field.

❽ Enter your new password in the Enter new password field, and re-enter to confirm in the Confirm new password field.

❾ Click **Save Changes**.



Using the Device User Interface

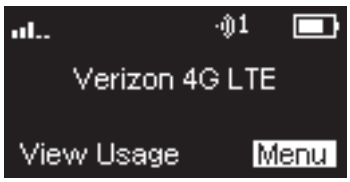
From the Jetpack UI display you can check your Jetpack status, view your current data usage, and access icon-based menu options.

To view the current status of your Jetpack:

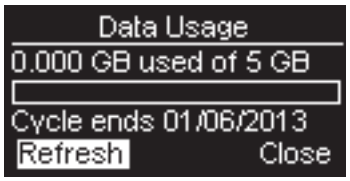
1. Press the power button to turn on the Jetpack and display the Home Screen. The status bar is at the top of the screen.
2. Check the status indicators for network signal strength , data traffic activity , messages 2, number of connected devices 10, and battery strength .

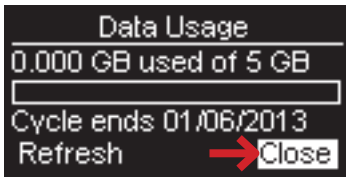
To view your current data usage:

1. Press the left navigation button to highlight **View Usage**.



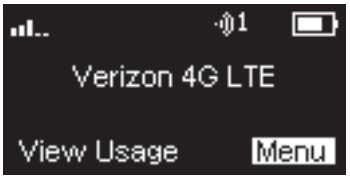
2. Press the select button. Current data usage in GB and billing cycle schedule displays on the Jetpack screen.
3. Press the left navigation button to refresh, and press the select button to close and return to the Home screen.





To access the icon-based menu options:

1. Press the select button to display the menu icons.
2. Use the navigation buttons to move left or right to highlight the desired menu option, then press the select button to open the highlighted option. Continue to press the select button to move through any additional screens.



3

Jetpack Settings

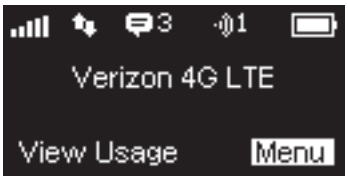
Managing Your Jetpack
My Jetpack Home
Data Usage
Connected Devices
Jetpack Settings
Messages
About Jetpack

Managing Your Jetpack

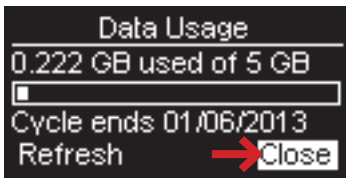
Manage, monitor, and customize your Jetpack settings directly on the Jetpack, or by using the Jetpack web-based interface.

On the Jetpack Device

1. Power on your Jetpack by pressing and holding the power button until the display lights and the Home screen displays.
2. Use the status bar to monitor network signal strength, data activity, messages, connected devices and battery life .
3. Press the left navigation button to highlight **View Usage**, then press the select button to display the Data Usage screen with your current data usage and billing cycle schedule.



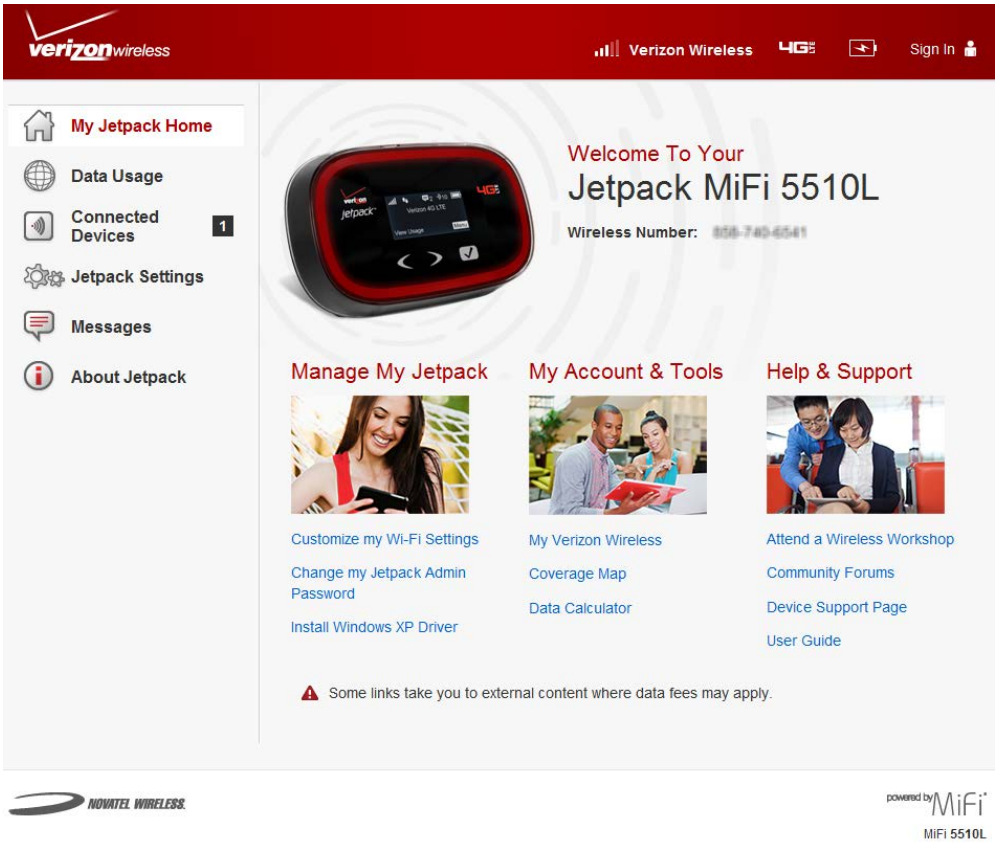
4. Press the select button to close the Data Usage screen and return to the Home screen.
5. Press the select button to display the Menu icons.
6. Use the navigation buttons to scroll to the desired Menu option.
7. Press the select button to open the selected Menu screen.



On the Jetpack Web Interface

To connect to the Jetpack web interface and customize your Jetpack settings:

1. Connect your computer or Wi-Fi enabled device to your Jetpack to access the Internet. (See Connecting to Your Jetpack on page 18.)
2. Open your browser and type http://my.jetpack/ or http://192.168.1.1 into the address bar. Press **Enter**. The Jetpack Home page opens. (See Sign In on page 25.)

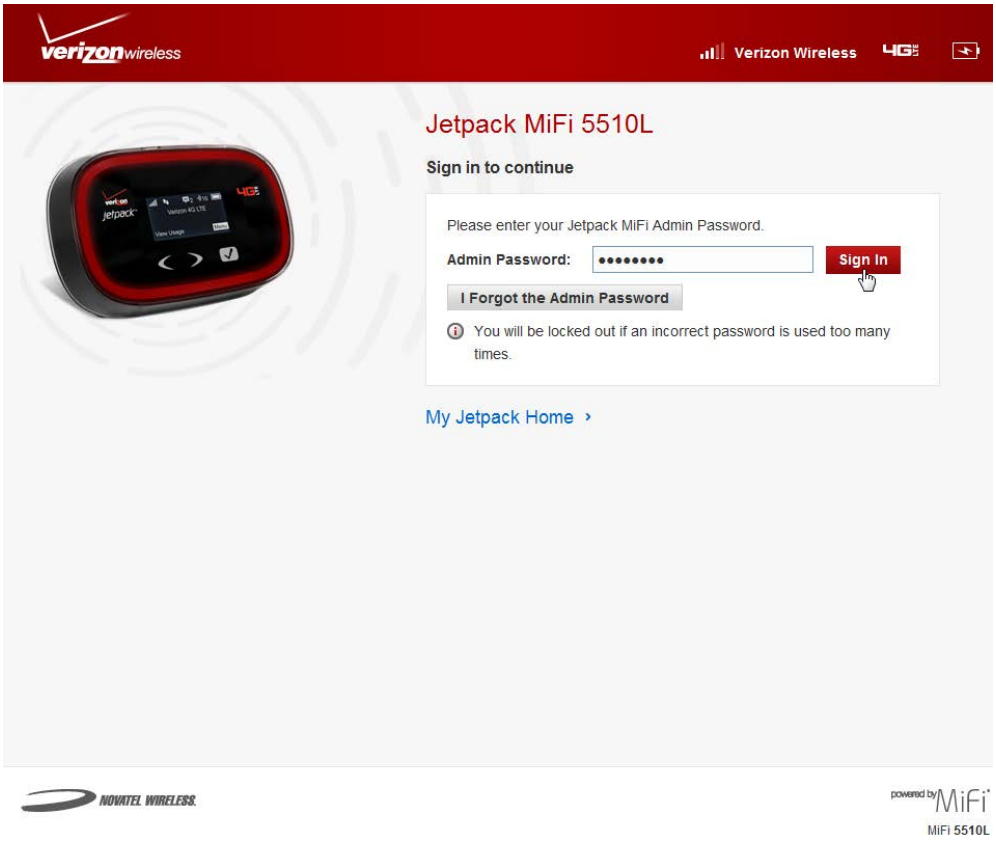


3. Click **Sign In** in the upper right corner of the window and type your Jetpack Admin password in the **Admin password** field and click **Sign In** to display the Jetpack Home page. (See My Jetpack Home on page 27.)

You are now able to customize your Jetpack settings configuration.

Sign In

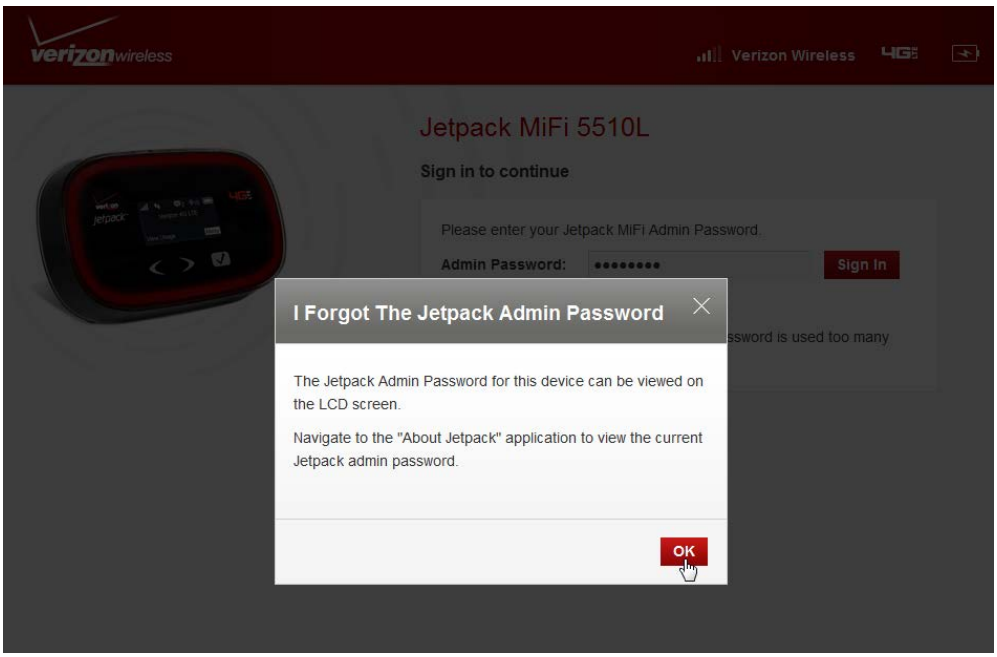
The Sign In page is the first page you see after connecting and prior to signing in. You can access more information after you sign in.



Sign In

Type the Jetpack Admin Password (the default password is found on the Jetpack by scrolling to the About Jetpack icon and selecting **Open** > **More** > **More** to display the Admin Password) in the **Sign In** field at the top right corner of the window. Click **Sign In**.

If you forget your Admin Password, click **I Forgot the Admin Password** and a reminder will appear telling you where to find your password. Click **OK**.


verizon wireless
Verizon Wireless
Jetpack MiFi 5510L
Sign in to continue
Please enter your Jetpack MiFi Admin Password.
Admin Password:
Sign In
I Forgot The Jetpack Admin Password
The Jetpack Admin Password for this device can be viewed on the LCD screen.
Navigate to the "About Jetpack" application to view the current Jetpack admin password.
OK

Menu Panel

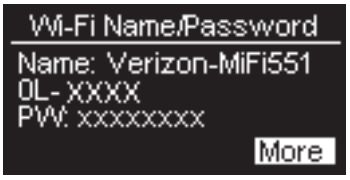
The Menu Panel is the primary navigation for MiFi Settings. You can access each feature under the appropriate menu.

My Jetpack Home

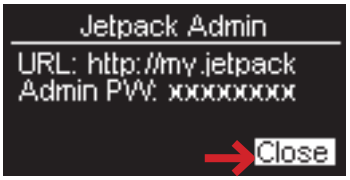
My Jetpack Home is your gateway to configuring and managing your Jetpack.

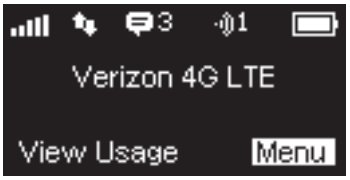
On the Jetpack Device

1. Power on your Jetpack by pressing and holding the power button until the display lights and the Home screen displays.
2. Press the select button to display the Menu icons.
3. Use the navigation buttons to scroll to the desired Menu option.
4. Press the select button to open the selected Menu screen.



5. To return to the Home screen, press the select button to close the selected menu screen, then scroll to the Jetpack Home icon and press the select button to Go Home.

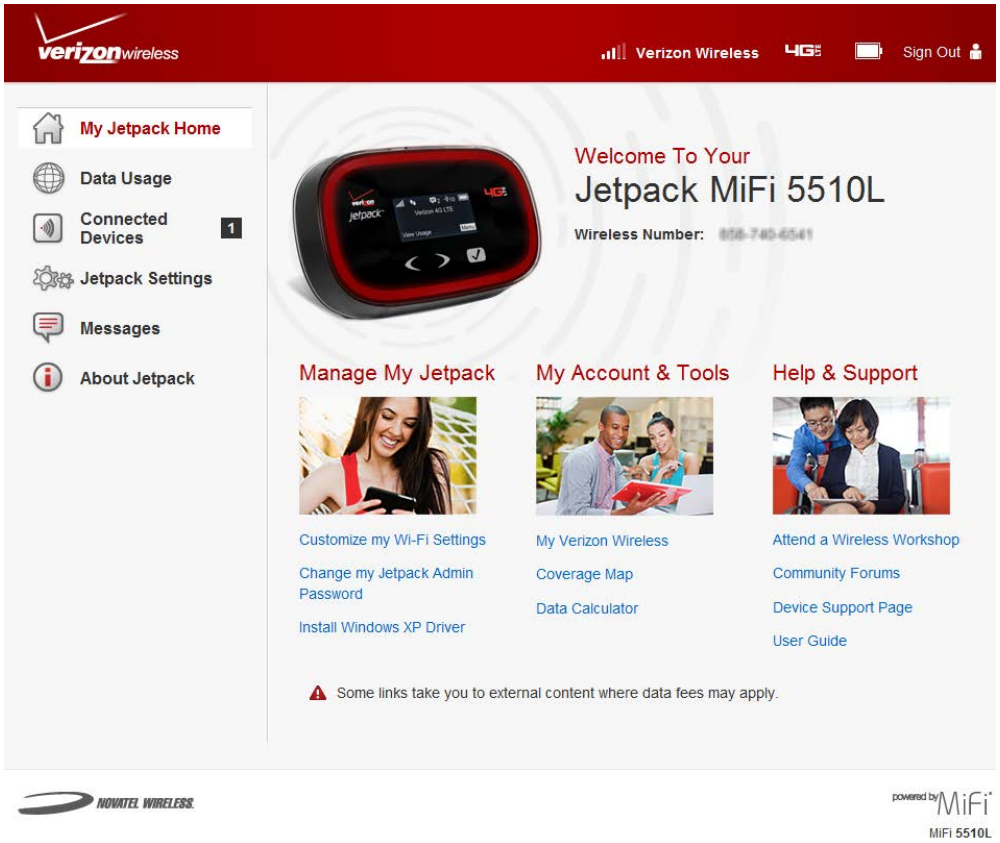




On the Jetpack Web Interface

The My Jetpack Home page allows you to quickly access commonly used links and all available menu options for your Jetpack. The Jetpack Home page contains the following quick link menu options:

- **Manage My Jetpack** (See Manage My Jetpack on page 29.)
- **My Account & Tools** (See My Account & Tools on page 33.)
- **Help & Support** (See Help & Support on page 34.)



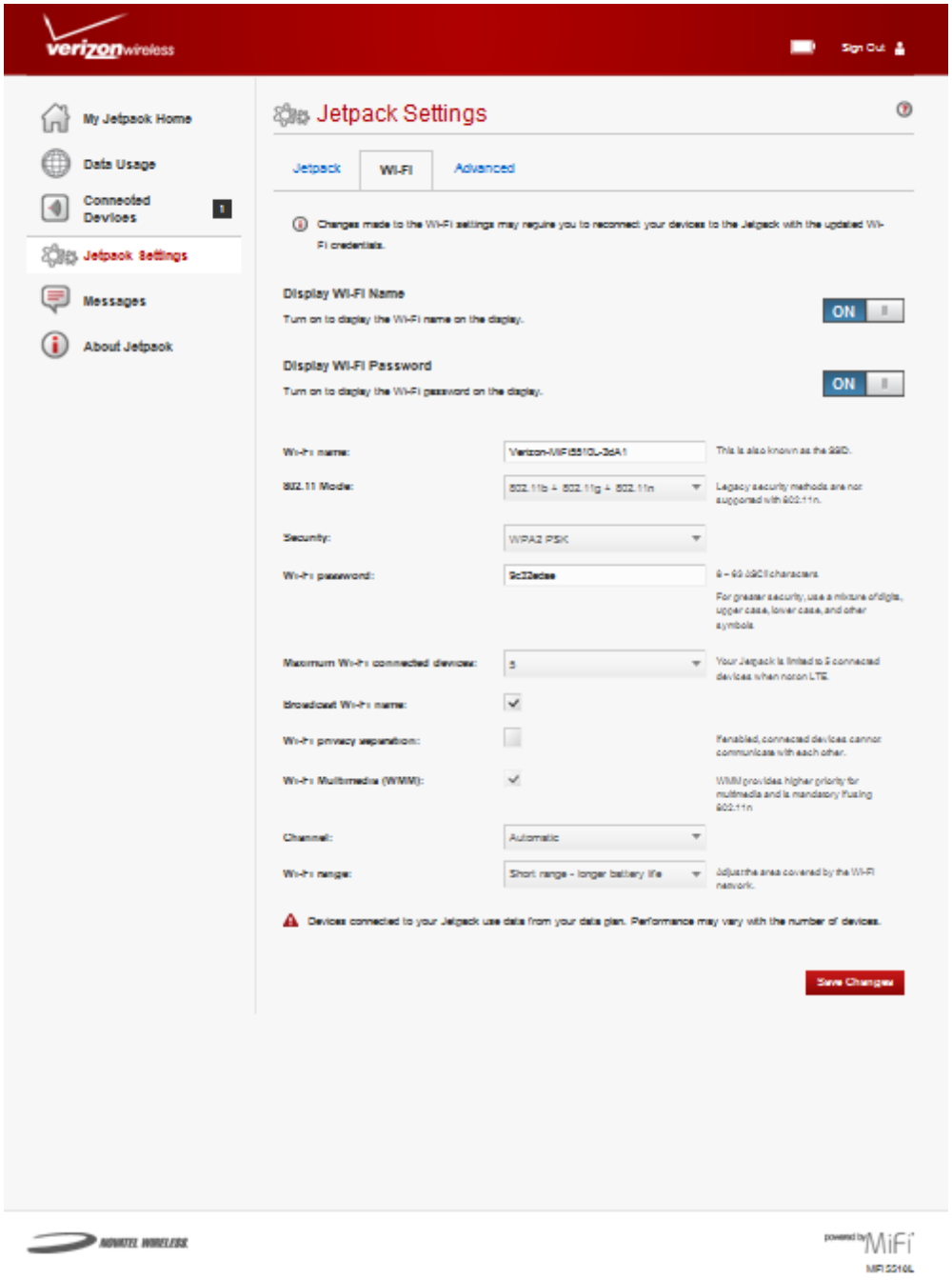
Manage My Jetpack

The Manage My Jetpack menu contains the following options:

- **Customize my Wi-Fi Settings** (See Customize my Wi-Fi Settings on page 30.)
- **Change my Jetpack Admin Password** (See Change my Jetpack Admin Password on page 31.)
- **Install Windows XP Driver** (See Install Windows XP Driver on page 33.)

Customize my Wi-Fi Settings

Clicking on **Customize my Wi-Fi Settings** will take you to the Jetpack Settings page Wi-Fi menu where you can customize Wi-Fi profiles and view details about the devices connected to your Jetpack. (See Wi-Fi on page 51.)

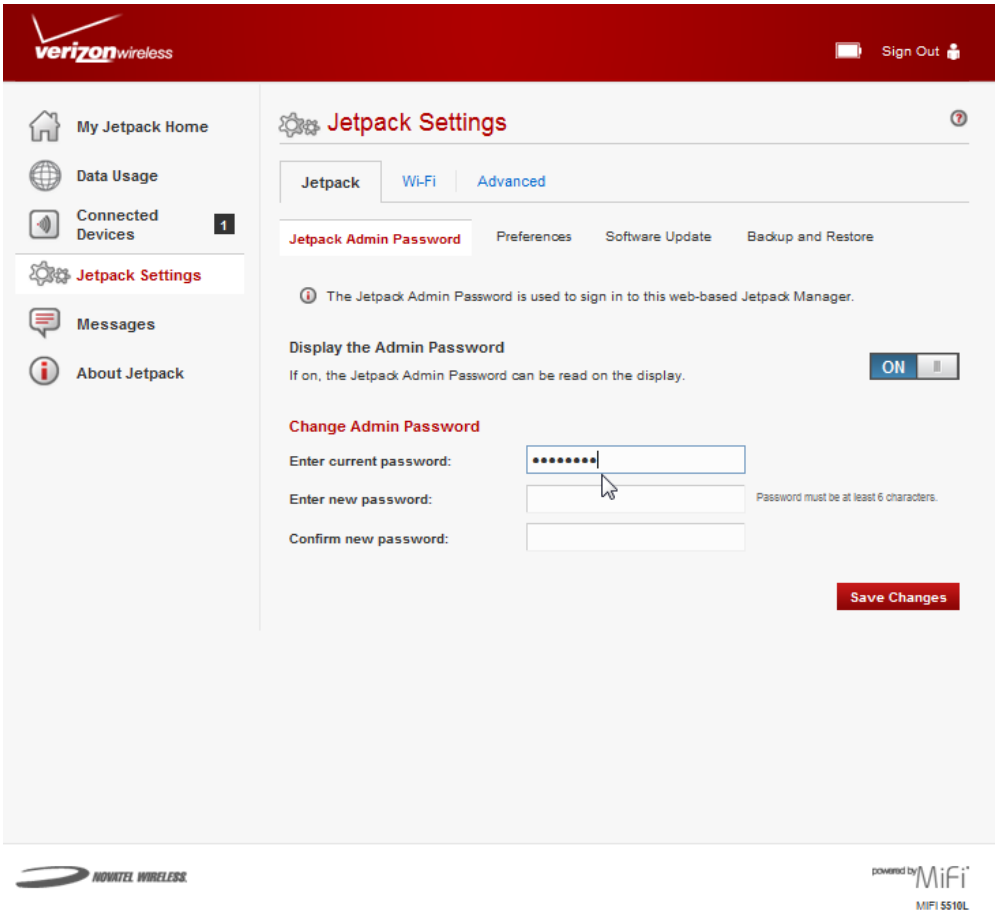

verizon wireless
Sign Out
My Jetpack Home
Data Usage
Connected Devices
Jetpack Settings
Messages
About Jetpack
Jetpack Settings
Jetpack
Wi-Fi
Advanced
Changes made to the Wi-Fi settings may require you to reconnect your devices to the Jetpack with the updated Wi-Fi credentials.
Display Wi-Fi Name
Turn on to display the Wi-Fi name on the display.
ON
Display Wi-Fi Password
Turn on to display the Wi-Fi password on the display.
ON
Wi-Fi name:
Verizon-MiFi5510L-3dA1
This is also known as the SSID.
802.11 Mode:
802.11b + 802.11g + 802.11n
Legacy security methods are not supported with 802.11n.
Security:
WPA2 PSK
Wi-Fi password:
9c32edae
8 – 63 ASCII characters.
For greater security, use a mixture of digits, upper case, lower case, and other symbols.
Maximum Wi-Fi connected devices:
5
Your Jetpack is limited to 5 connected devices when not on LTE.
Broadcast Wi-Fi name:
Wi-Fi privacy separation:
If enabled, connected devices cannot communicate with each other.
Wi-Fi Multimedia (WMM):
WMM provides higher priority for multimedia and is mandatory if using 802.11n
Channel:
Automatic
Wi-Fi range:
Short range - longer battery life
Adjust the area covered by the Wi-Fi network.
Devices connected to your Jetpack use data from your data plan. Performance may vary with the number of devices.
Save Changes
NOVATEL WIRELESS
powered by MiFi
MiFi 5510L

Change my Jetpack Admin Password

Clicking on **Change my Jetpack Admin Password** will take you to the Jetpack Admin Password section of the Jetpack menu on the Jetpack Settings page. (See Jetpack Admin Password on page 47.) The Jetpack Admin Password page enables you to set the administration password. This is the password you use to sign in to Jetpack Settings.

To change the administration password used to sign in to your Jetpack, follow these steps:

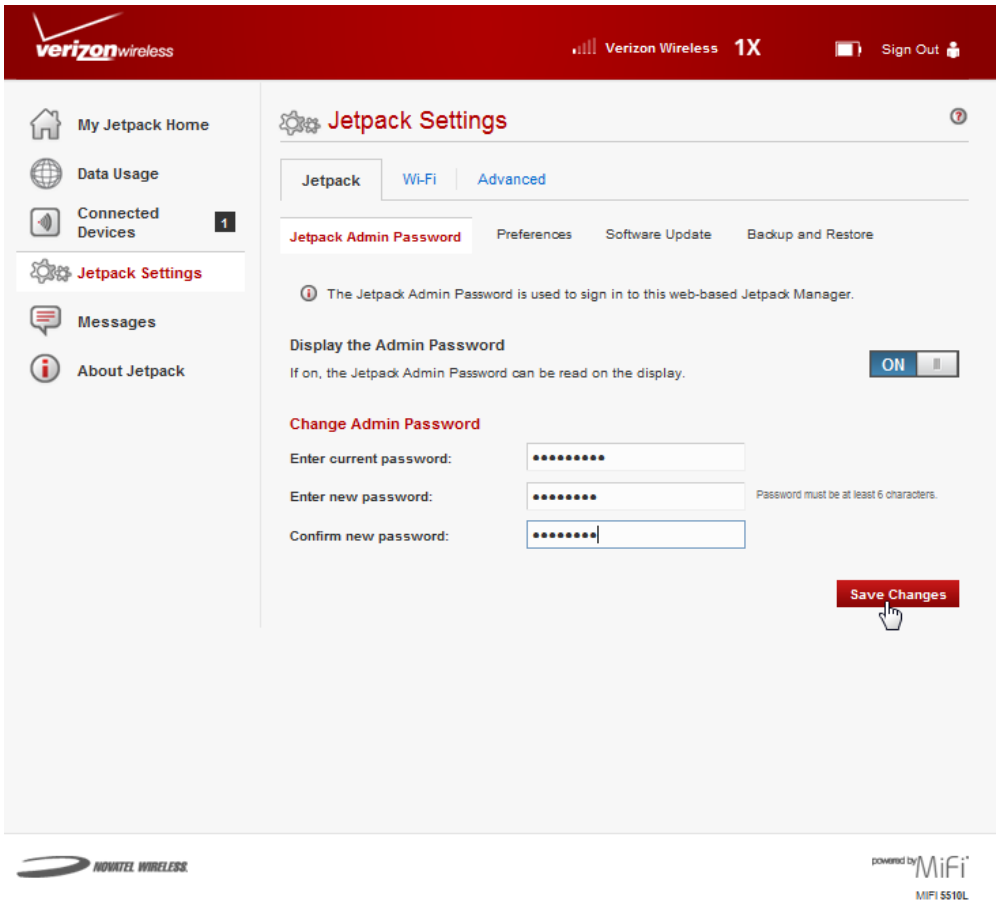
❶ Enter your current password in the **Enter current password** box.



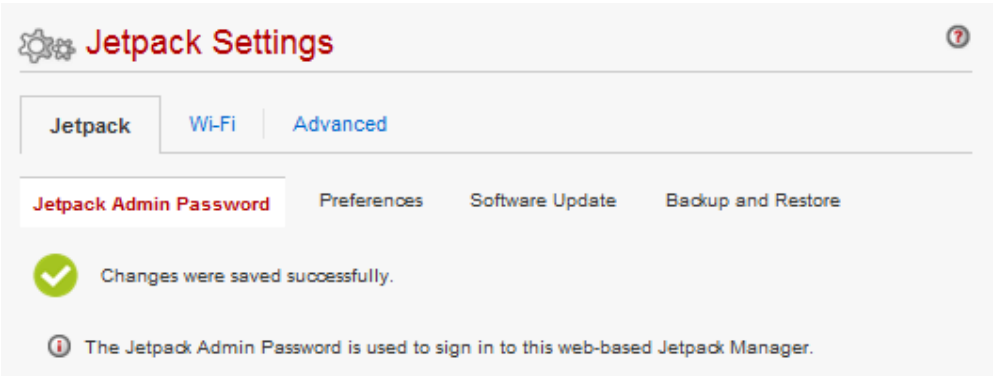
❷ Enter your new password in the **Enter new password** box.

❸ Re-enter your new password in the **Confirm new password** box.

❹ Click **Save Changes**.



❺ A message displays confirming that your password has been changed.



Next time you sign in to Jetpack Settings, you need to use the new password.

IMPORTANT Record your administration password. If you forget it, you have to reset the Jetpack before you can use Jetpack Settings. (See How do I reset the Jetpack back to factory settings? on page 78.)

Install Windows XP Driver

Click on **Install Windows XP Driver** to download the driver for Windows XP. This driver is only needed if you use a USB cable to connect the Jetpack to a Windows XP computer.

My Account & Tools

The My Account & Tools menu contains the following options:

- **My Verizon Wireless**
- **Coverage Map**
- **Data Calculator**

My Verizon Wireless

My Verizon Wireless allows you to manage your account, pay your bill, purchase accessories and more. Register at **verizonwireless.com/myverizon**.

Coverage Map

Click on **Coverage Map** to access the Verizon Wireless coverage map.

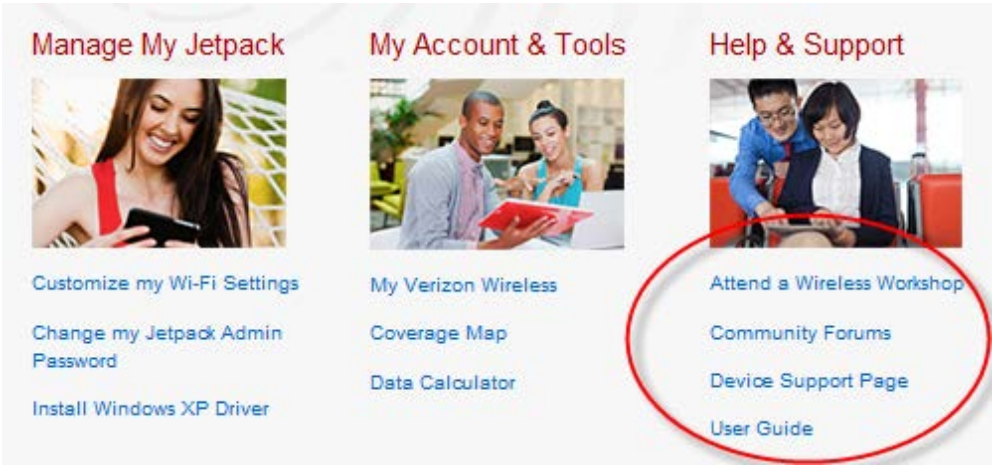
Data Calculator

Click on **Data Calculator** to get up-to-date information on your data usage.

Help & Support

The Help & Support menu contains the following options:

- **Attend a Wireless Workshop**
- **Community Forums**
- **Device Support Page**
- **User Guide**



Attend a Wireless Workshop

Click on **Attend a Wireless Workshop** to attend a free Wireless Workshop online or in a store to learn everything you need to know about your Jetpack.

Community Forums

Click on **Community Forums** to follow, share and participate in the Broadband & Netbook Community. In addition, you can search Broadband & Netbook Community discussions for specific topics.

Device Support Page

Click on **Device Support Page** to join and discuss the latest news in Verizon Wireless products, services, and more.

User Guide

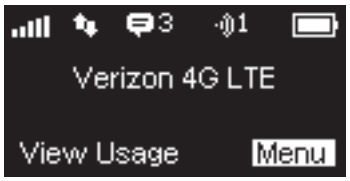
Click on **User Guide** to access an online version of the Jetpack User Guide.

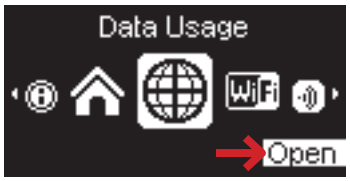
Data Usage

You can quickly and easily check your data usage and billing cycle directly on the Jetpack, or on the Jetpack web User Interface.

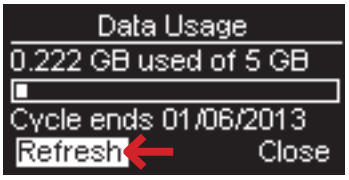
On the Jetpack Device

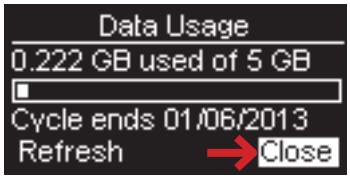
1. To display your data usage and billing cycle schedule, press the select button on the Home screen to display the Menu screen.





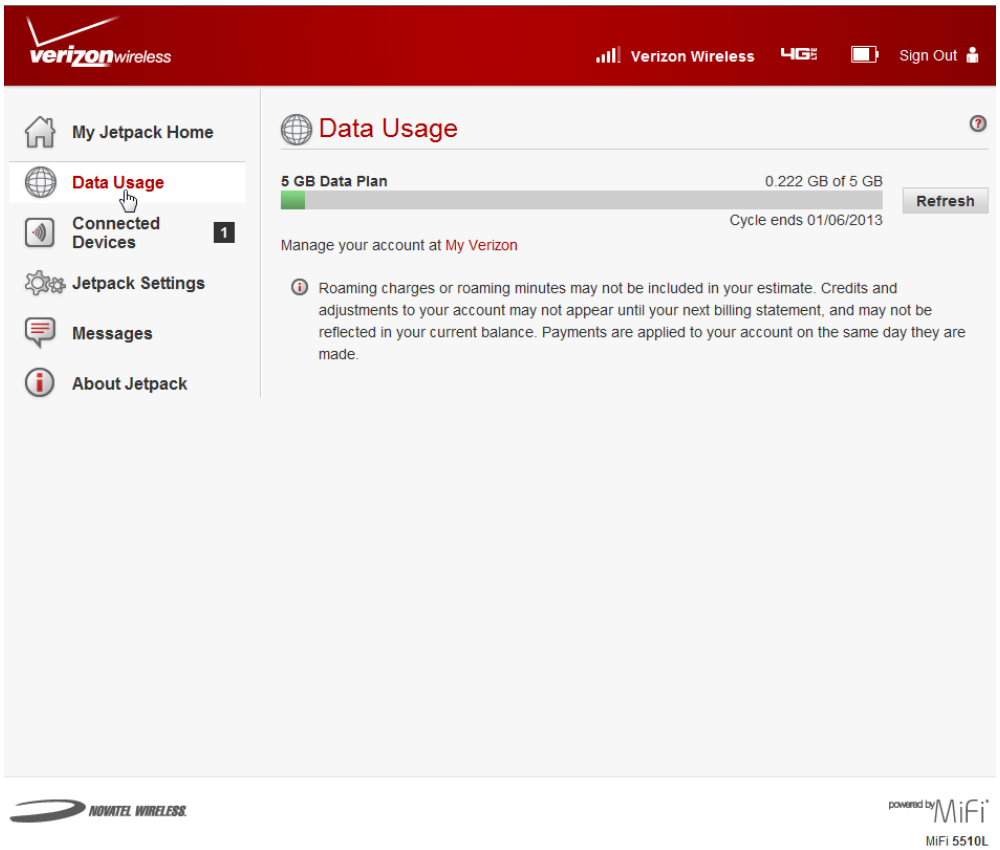
2. Using the navigation button, scroll to the Data Usage icon and press the select button to open the Data Usage screen and display your current data usage and billing cycle schedule.
3. To refresh the Data Usage screen, use the navigation button to highlight Refresh, then press the select button to update and display your current data usage and billing cycle schedule.
4. Press the select button to close the Data Usage screen and return to the Menu screen.





On the Jetpack Web Interface

The Data Usage page allows you to obtain data usage and billing cycle information for your mobile broadband plan. Click **Data Usage** on the Menu panel to display the Data Usage page and access information specific to your particular plan. You can also access and manage your account by clicking on **My Verizon**.


verizon wireless
Verizon Wireless
4G
Sign Out
My Jetpack Home
Data Usage
Connected Devices
1
Jetpack Settings
Messages
About Jetpack
Data Usage
5 GB Data Plan
0.222 GB of 5 GB
Refresh
Cycle ends 01/06/2013
Manage your account at My Verizon
Roaming charges or roaming minutes may not be included in your estimate. Credits and adjustments to your account may not appear until your next billing statement, and may not be reflected in your current balance. Payments are applied to your account on the same day they are made.
NOVATEL WIRELESS
powered by MiFi
MiFi 5510L

Connected Devices

You can view and edit Wi-Fi enabled devices currently connected to your Jetpack, as well as any currently blocked devices.

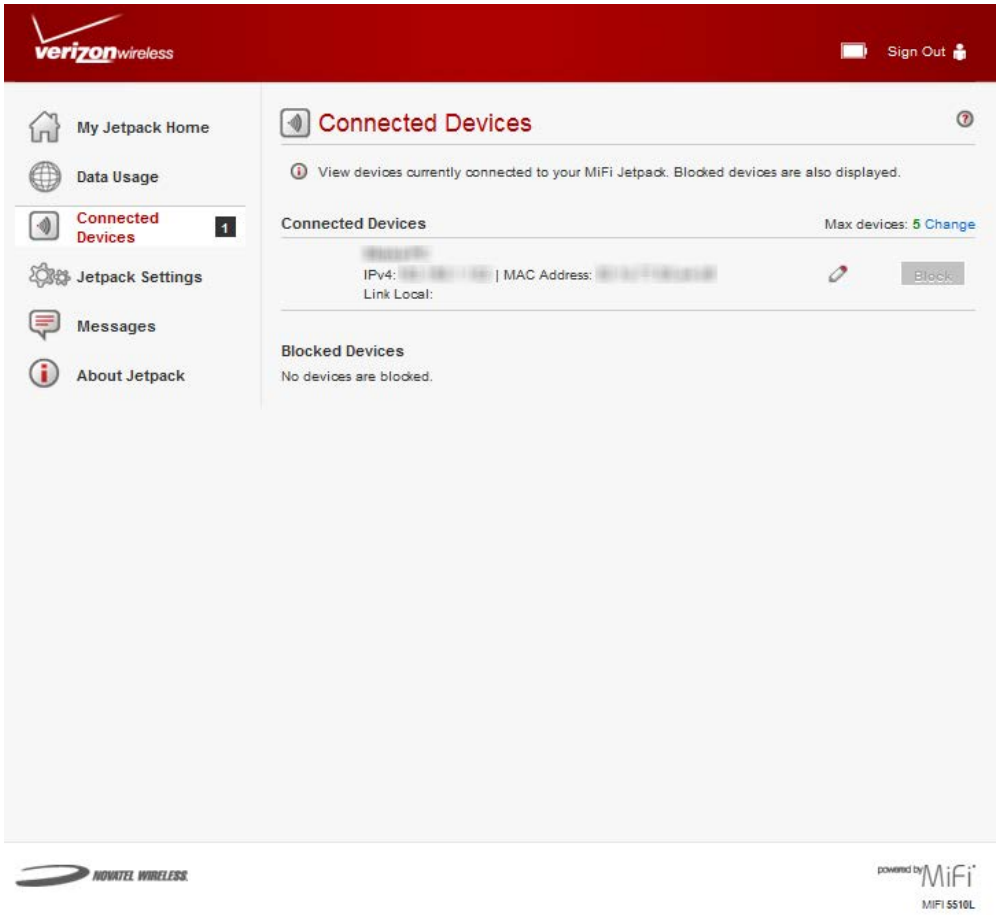
On the Jetpack Device

1. To display Wi-Fi enabled devices currently connected to your Jetpack, press the select button on the Home screen to display the Menu screen.
2. Using the navigation button, scroll to the Connected Devices icon and press the select button to open the Connected Devices screen and display devices currently connected to or blocked from connecting to your Jetpack.
3. Press the select button to close the Connected Devices screen and return to the Menu screen.

On the Jetpack Web Interface

The Connected Devices page allows you to view and edit devices that are currently connected to your Jetpack. You can also view and unblock any blocked devices. The Connected Devices page contains the following:

- **Connected Devices** — Displays the IP Address, MAC Address and Link Local of up to ten connected devices.
- **Blocked Devices** — Displays any blocked devices.



Connected Devices

The Connected Devices menu contains the following options:

- **Type** — The first column indicates the type of connected device. You can use the **Edit** option to set or change the type. If the type has not been set, no icon is displayed. Once you set the device type, an appropriate icon is displayed.
- **Name** — Normally, this is the hostname of the connected device, as set on the connected device. If you have used this interface to assign a name to a connected device, the assigned name displays in place of the hostname. In rare cases, the hostname may be unavailable. You can use the **Edit** option to change the name of any connected device.
- **IP Address** — The IP address of the connected device.
- **MAC Address** — The MAC Address is a unique network identifier for this connected device.
- **Link-Local** — If the connected device supports IPv6, the Link-Local IPv6 address is displayed.
- **Edit** — Allows you to edit a connected device.
- **Change** — Allows you to change the maximum number of connected devices from one to ten.

Connected Devices
View devices currently connected to your MiFi Jetpack. Blocked devices are also displayed.
Connected Devices
Max devices: 5 Change
Block

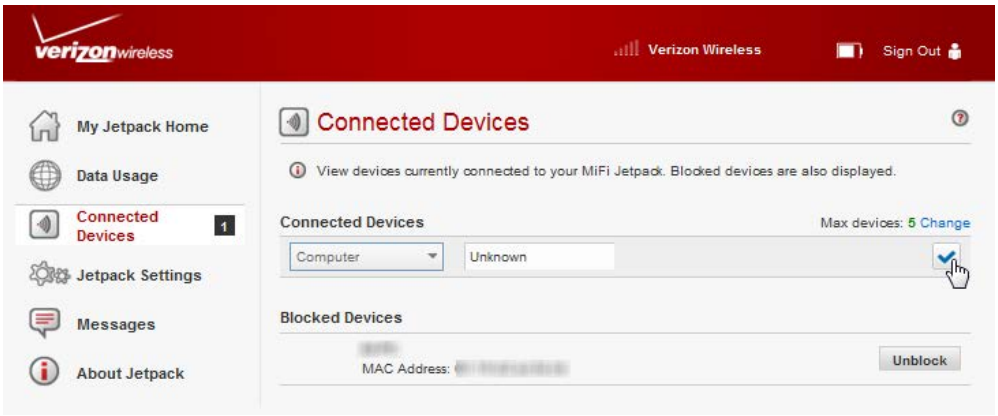
Edit a Connected Device

To edit a connected device:

❶ Click the pencil tool. A page opens allowing you to edit a connected device.

❷ Select the appropriate change from the **Connected Devices** dropdown menu.

❸ Click the checkmark to finish editing the device.

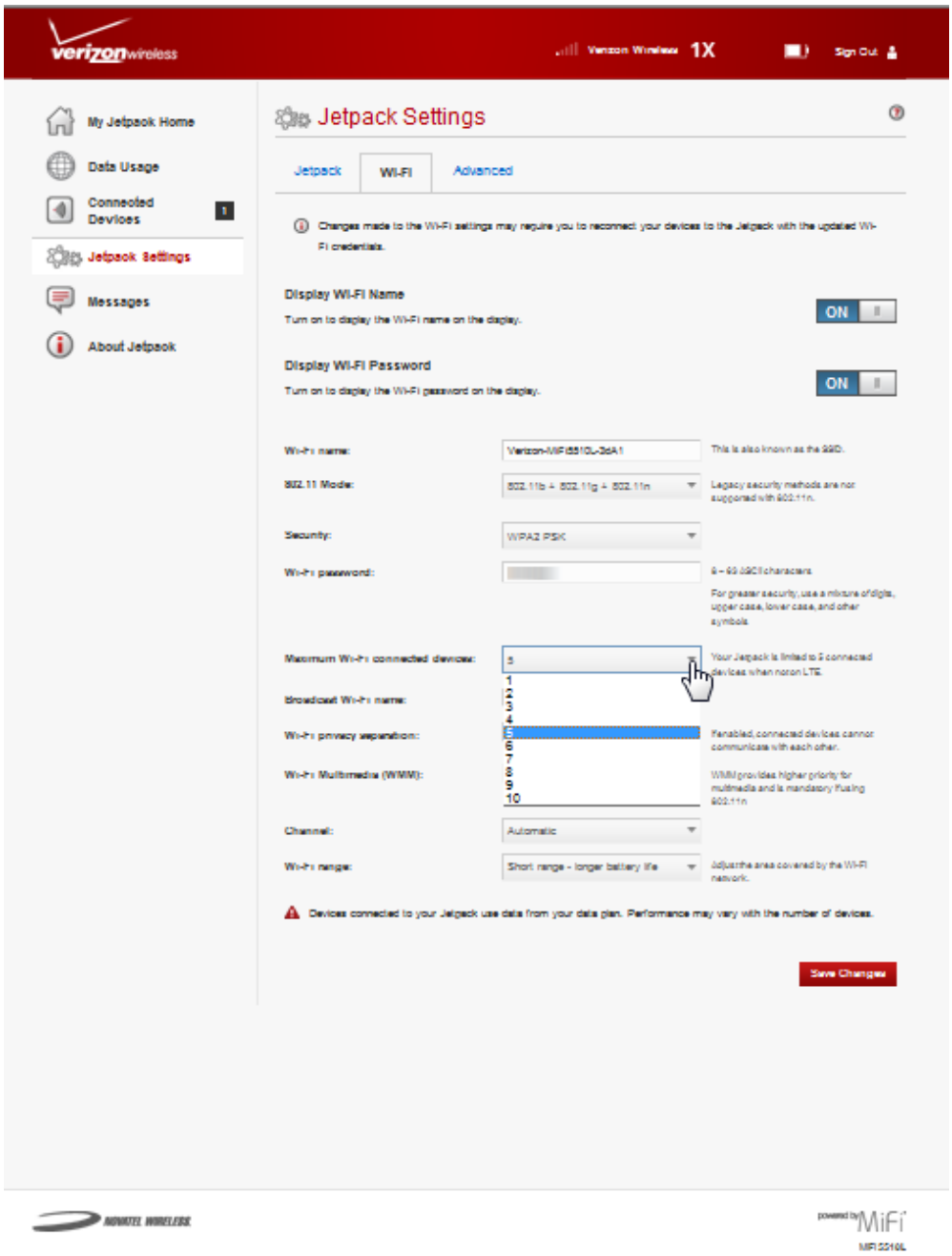


Change the Maximum Number of Connected Devices

To change the maximum number of connected devices:

❶ Click **Change** on the **Connected Devices** page.

❷ The Jetpack Settings Wi-Fi page opens. Select the number of devices from the **Maximum Wi-Fi connected devices** dropdown menu.

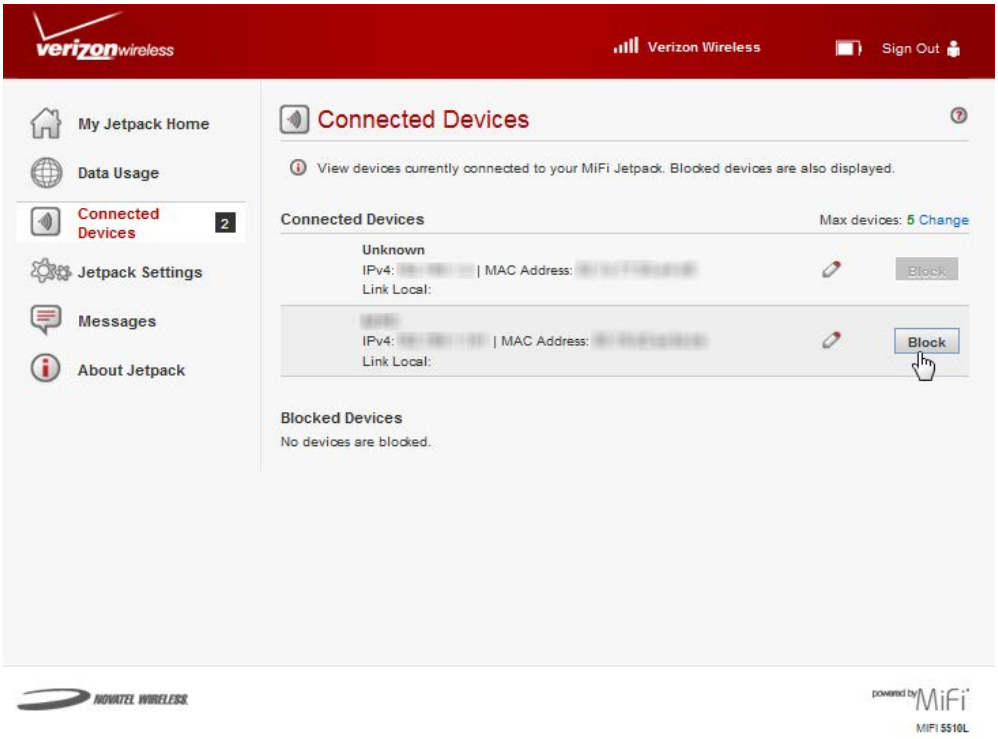


❸ Click **Save Changes**.

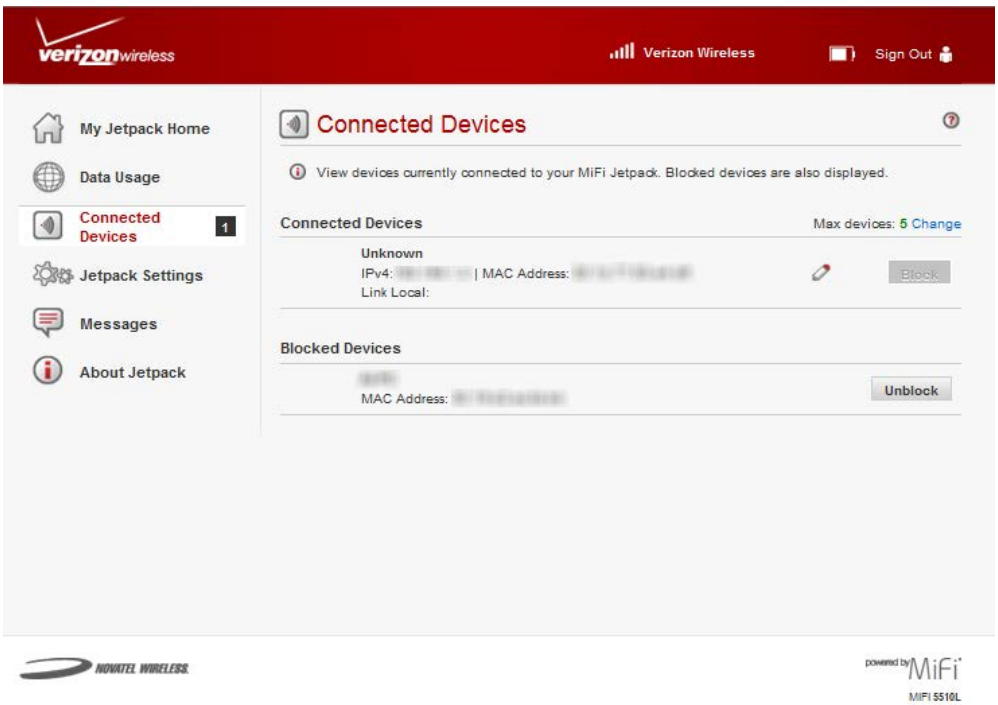
Blocked Devices

The Blocked Devices menu contains the following menu options:

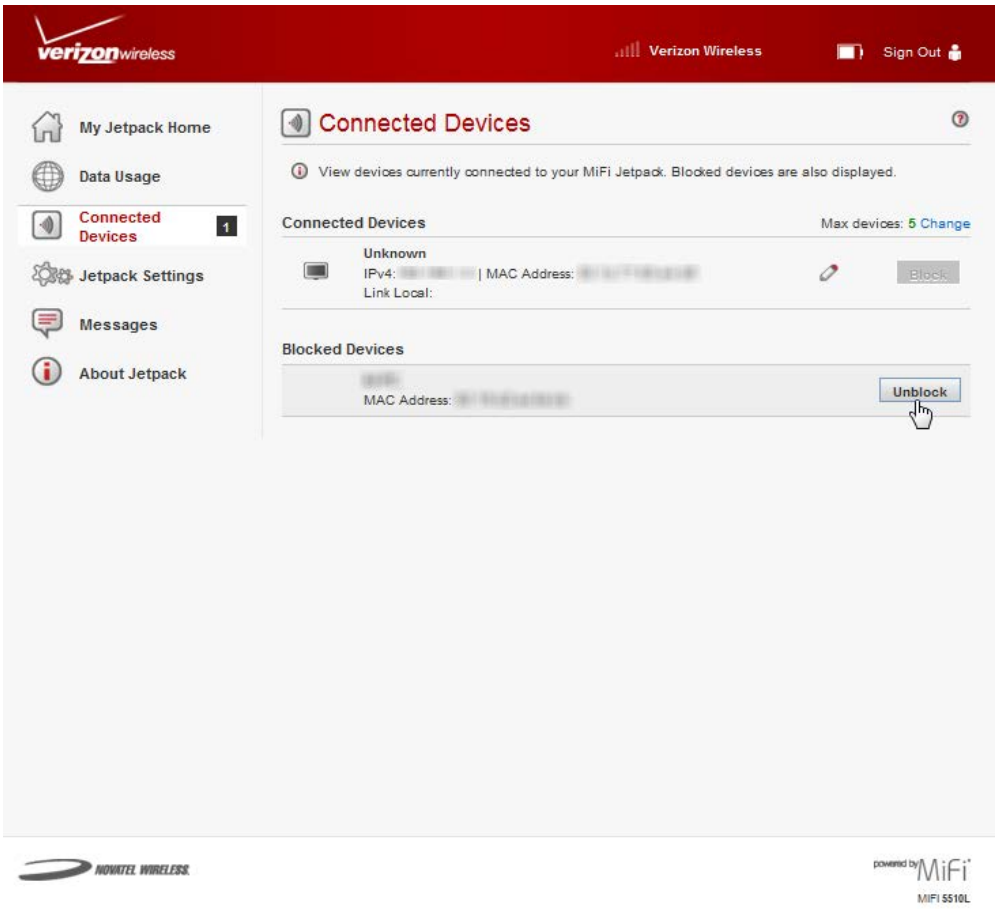
- **Block Button** — Click **Block** to disconnect a connected device and prevent it from reconnecting. The blocked device then appears in the **Blocked List**. This option is available for use with each connected device, except for your own device, and any device connected via USB.



- **Blocked List** — This lists any devices you have blocked. Note that since these devices are not currently connected, and are blocked from connecting, they do not have an IP address. Instead, they are identified by their name and MAC address.



- **Unblock Button** — Click **Unblock** to unblock a previously blocked device, freeing it to connect again. The unblocked device is deleted from the **Blocked List**, and will reappear in the **Connected Devices** list when it connects.



Jetpack Settings

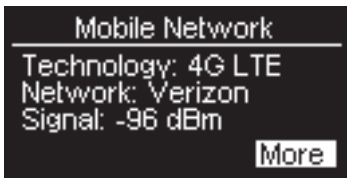
Jetpack Settings allow you to make device changes, select mobile network options, update software, and backup and restore files to your Jetpack.

On the Jetpack Device

Mobile Network

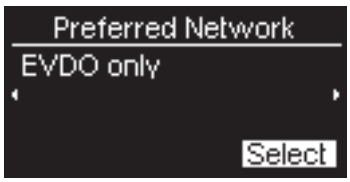
❶ To select mobile network settings, press the select button on the Home screen to display the Menu screen.

❷ Using the navigation button, scroll to the Mobile Network icon and press the select button to open the Mobile Network screen and display current technology, network and signal information.



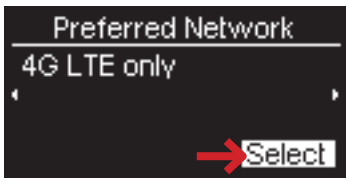
❸ Press the select button to display the Preferred Network screen.

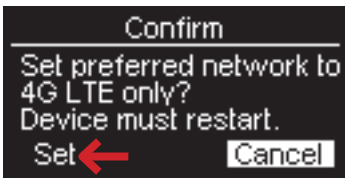
❹ Using the right navigation button, scroll to display available network preferences.

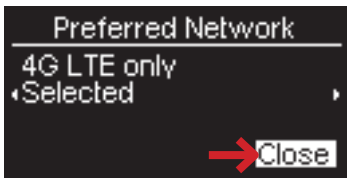


❺ Press the select button to select the desired preferred network. If you change to a new network, the Jetpack will restart.

❻ Press the select button to close the Preferred Network screen and return to the Menu screen.

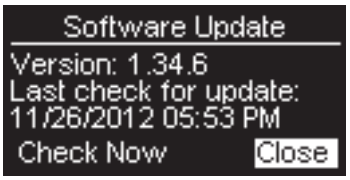


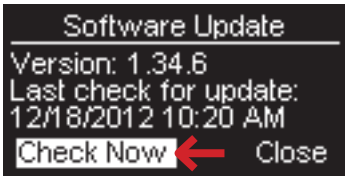


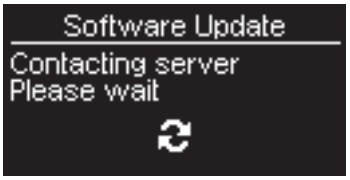


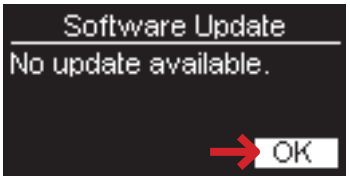
Software Update

1. To check for a new software update , press the select button on the Home screen to display the Menu screen.
2. Using the navigation button, scroll to the **Software Update** icon and press the select button to open the Software Update screen and display the current software version.
3. To check for a new update, use the left navigation button to highlight **Check Now**, then press the select button to check for a new update.
4. Select **OK** to return to the Menu screen.





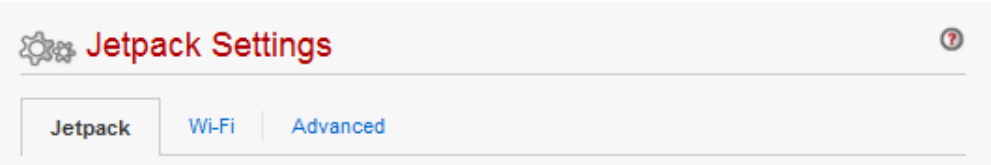




On the Jetpack Web Interface

The Jetpack Settings page allows you to make administration password and preference changes; obtain software update information; and backup and restore files to your Jetpack. The Jetpack Settings page contains the following menu options:

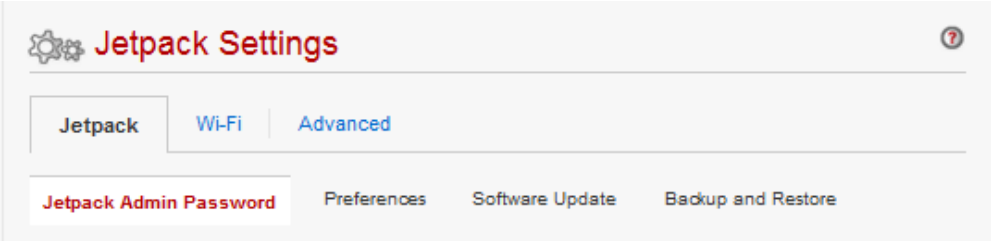
- **Jetpack** (See Jetpack on page 46.)
- **Wi-Fi** (See Wi-Fi on page 51.)
- **Advanced** (See Advanced on page 53.)



Jetpack

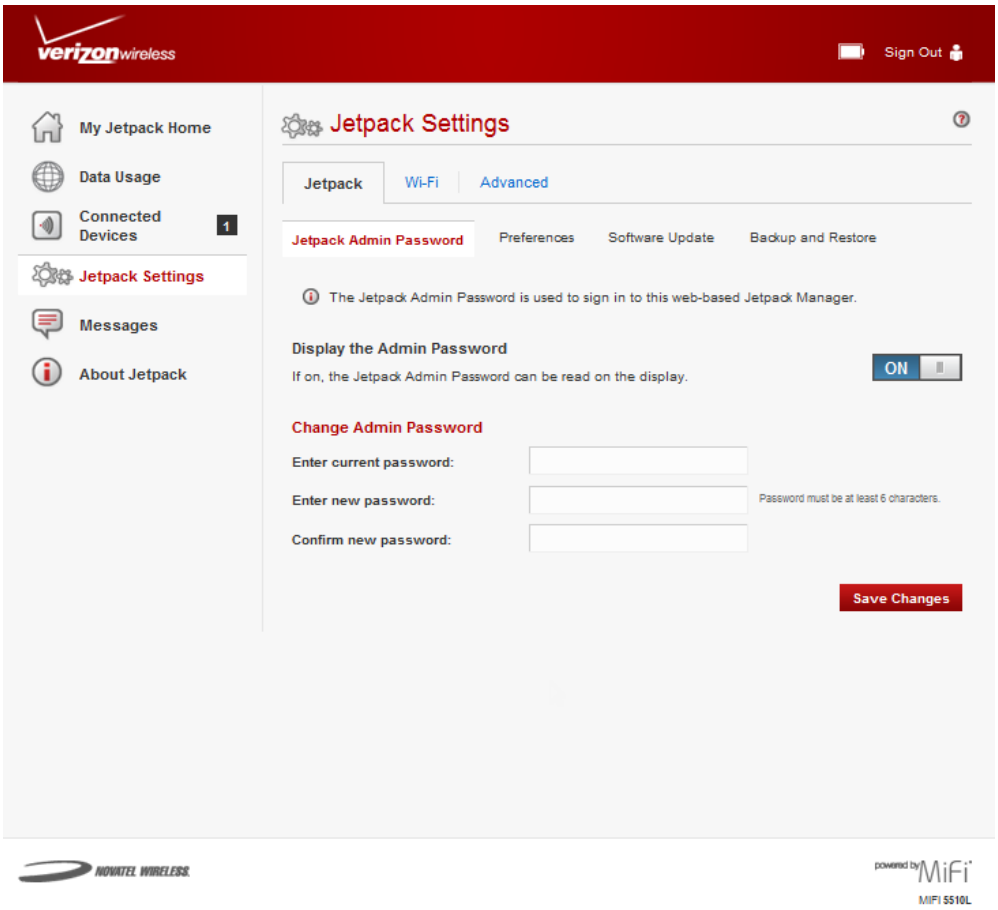
The Jetpack menu contains the following menu options:

- **Jetpack Admin Password** (See Jetpack Admin Password on page 47.)
- **Preferences** (See Preferences on page 48.)
- **Software Update** (See Software Update on page 49.)
- **Backup and Restore** (See Backup and Restore on page 50.)



Jetpack Admin Password

The Jetpack Admin Password page allows you to display, hide and/or change the Admin Password.



Display or Hide the Admin Password

Slide the **ON/OFF** button to **ON** to display the Jetpack Admin Password or to **OFF** to hide the Jetpack Admin Password.

Change the Admin Password

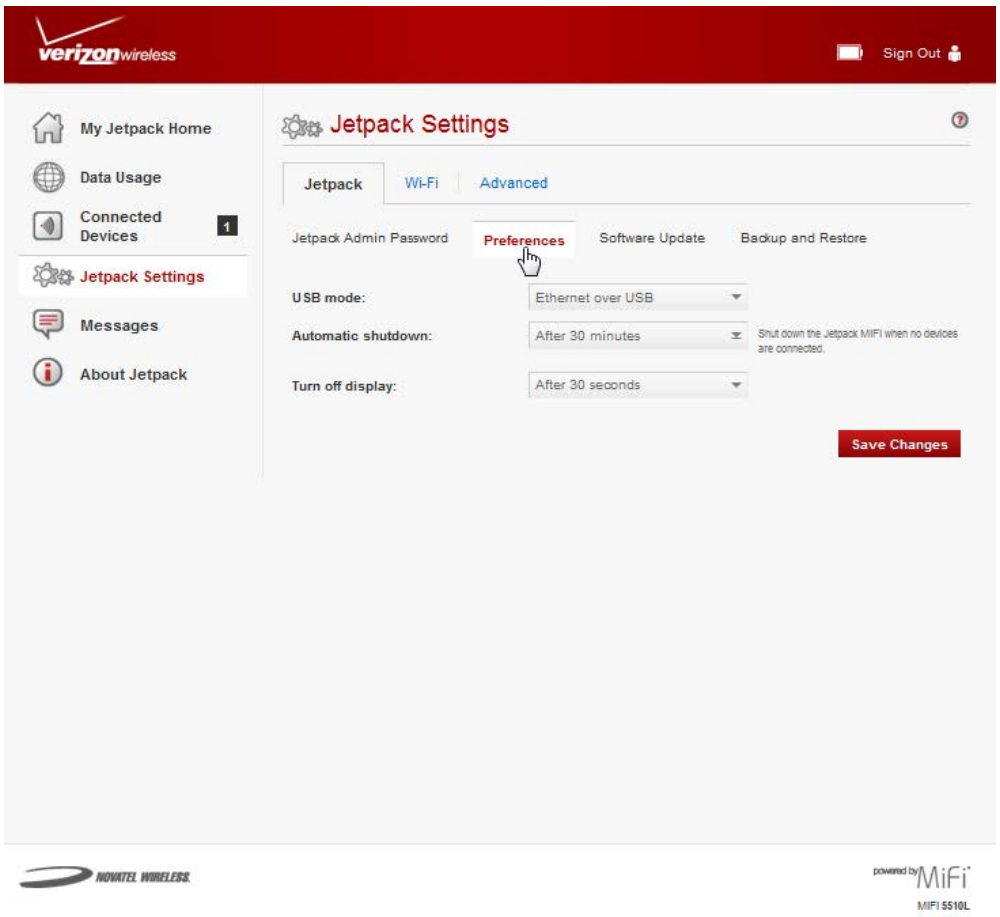
To change your Admin Password, follow these steps:

1. Type your current password in the **Enter current password** field.
2. Type your new password in the **Enter new password** field.
3. Type your new password a second time in the **Confirm new password** field.
4. Click **Save Changes** to save any changes made to your password.

Preferences

The Preferences page contains the following:

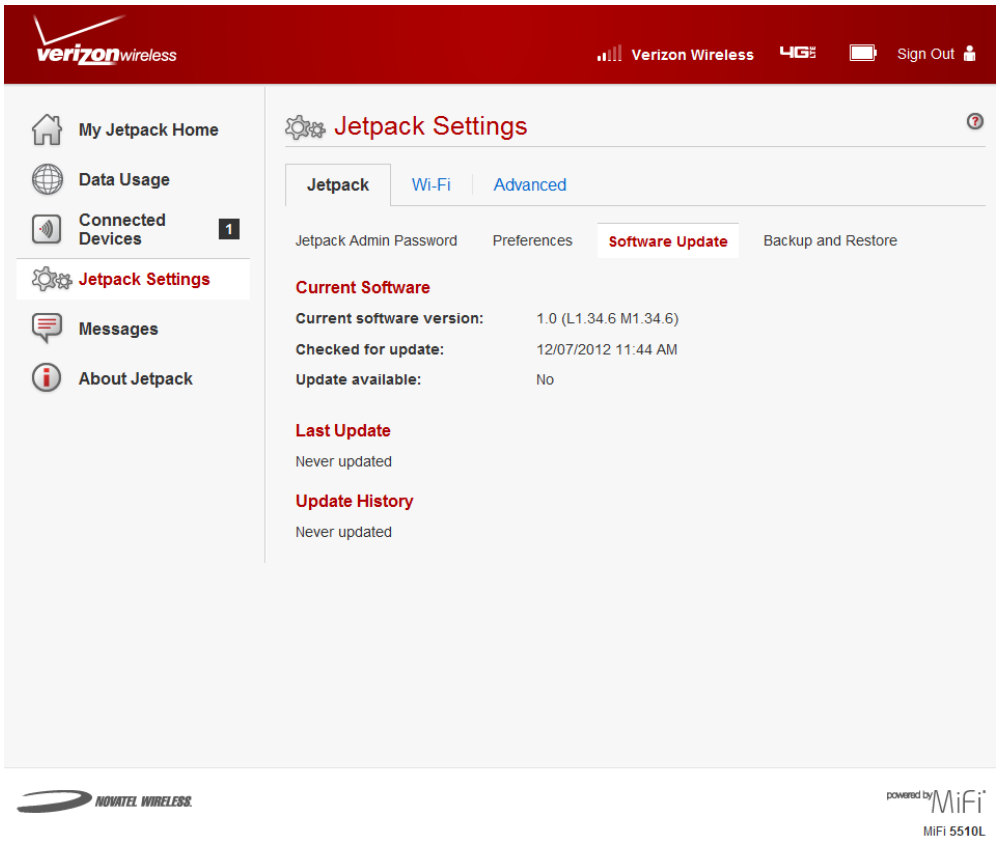
- **USB Mode** — The **USB mode** menu changes the USB mode to **Ethernet over USB** or **Charge only**.
  - **Charge only** — If selected, the Jetpack will only draw power from the USB port. No communication is possible between your computer and this device when connected via USB. Note that a standard USB port does not provide sufficient current to power this device, so the battery will still be depleted.
  - **Ethernet over USB** — If selected, an Ethernet (TCP/IP) connection is established between the Jetpack and your computer. The computer can access the Internet and the Web-based interface via the USB connection. For Windows XP, drivers must be installed to enable Ethernet over USB. The link to download and install these drivers is located on the Home page.
- **Automatic shutdown** — The **Automatic shutdown** menu changes the amount of time (**After 5 minutes**, **After 10 minutes**, **After 30 minutes** or **Never)** that expires before the Jetpack automatically shuts down.
- **Turn off display** — The **Turn off display** menu changes the amount of time (**After 30 seconds**, **After 1 minute**, **After 5 minutes** or **Never)** that expires before the display turns off.
- **Save Changes —** Click **Save Changes** whenever you make a change to finalize and save the new setting.



Software Update

The Software Update page contains the following sections:

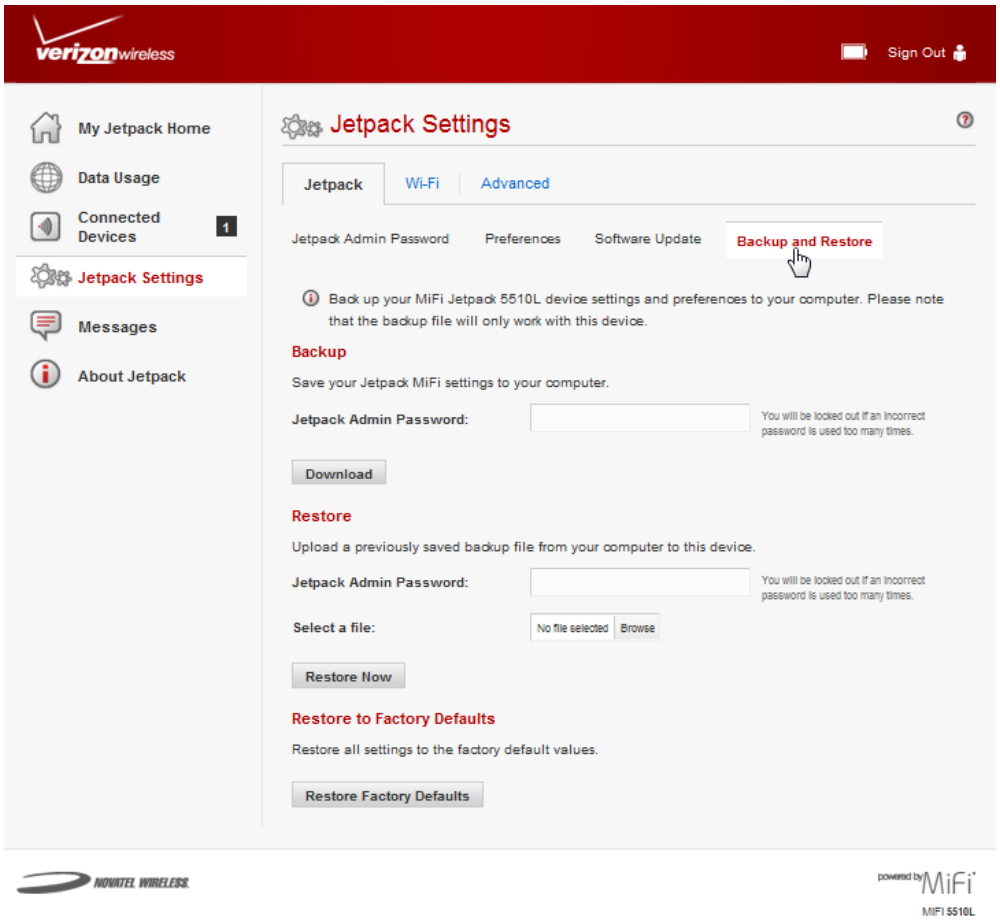
- **Current Software** — Displays information for the current software version, date of last check for updates and the number of updates currently available.
- **Last update** — Displays the date of the last software update.
- **Update History** — Displays the software update history.



Backup and Restore

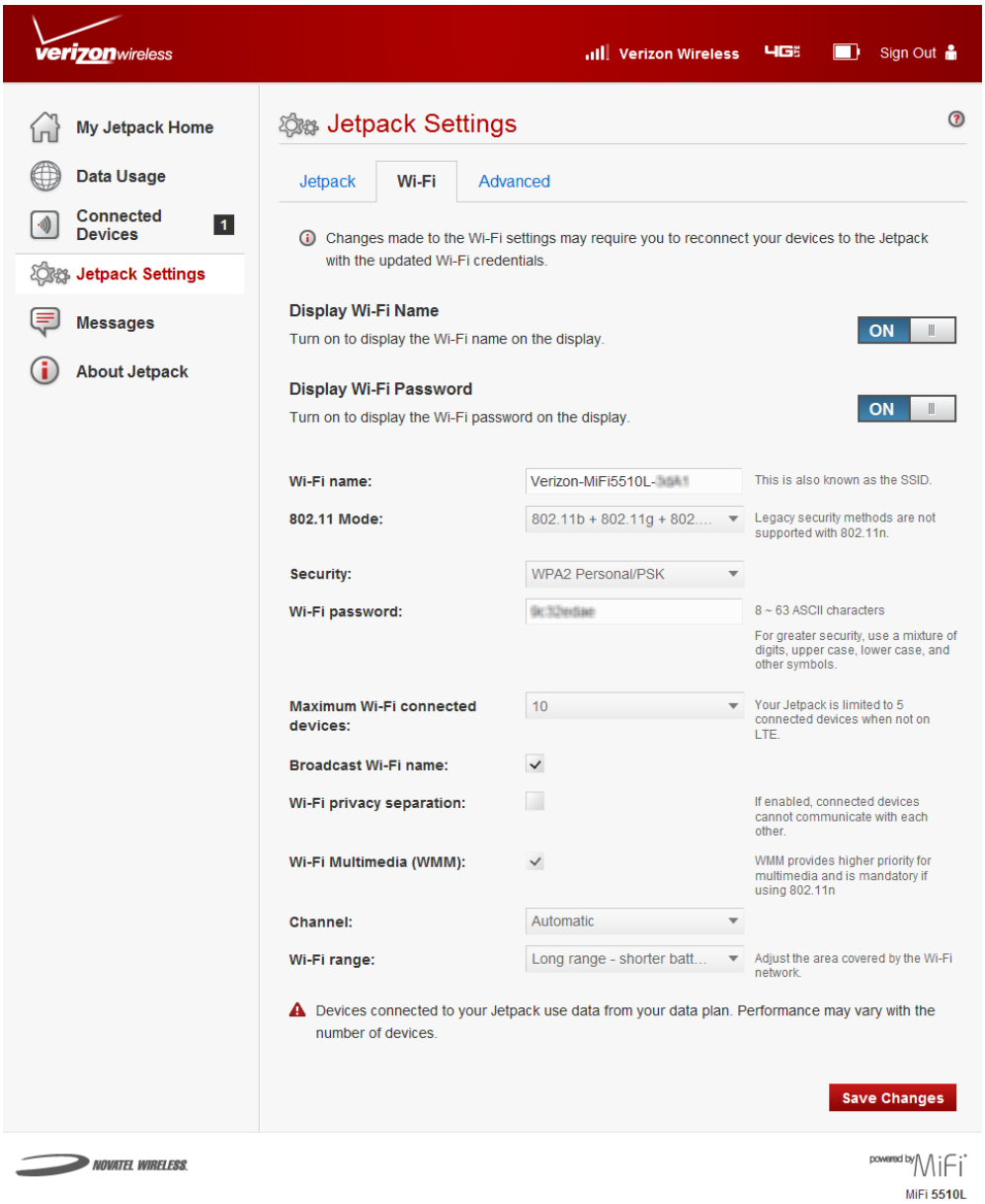
The Backup and Restore page contains the following sections:

- **Backup** — Allows you to save your Jetpack settings to your computer. You must enter your Admin Password in the **Jetpack Admin Password** field and click **Download** to save settings to your computer.
- **Restore** — Allows you to upload a previously saved backup file from your computer to your Jetpack. Click **Browse** and select a file, then enter your Admin Password in the **Jetpack Admin Password** field and click **Restore Now** to restore the file to your Jetpack.
- **Restore to Factory Defaults** — Allows you to restore all settings on your Jetpack to the factory default values. Click **Restore Factory Defaults** to restore all such settings.



Wi-Fi

The Wi-Fi menu allows you to customize the Wi-Fi profiles and view details about the devices connected to your Jetpack.


verizon wireless
Verizon Wireless
4G LTE
Sign Out
My Jetpack Home
Data Usage
Connected Devices
1
Jetpack Settings
Messages
About Jetpack
Jetpack Settings
Jetpack
Wi-Fi
Advanced
Changes made to the Wi-Fi settings may require you to reconnect your devices to the Jetpack with the updated Wi-Fi credentials.
Display Wi-Fi Name
Turn on to display the Wi-Fi name on the display.
ON
Display Wi-Fi Password
Turn on to display the Wi-Fi password on the display.
ON
Wi-Fi name:
Verizon-MiFi5510L-
This is also known as the SSID.
802.11 Mode:
802.11b + 802.11g + 802....
Legacy security methods are not supported with 802.11n.
Security:
WPA2 Personal/PSK
Wi-Fi password:
8 ~ 63 ASCII characters
For greater security, use a mixture of digits, upper case, lower case, and other symbols.
Maximum Wi-Fi connected devices:
10
Your Jetpack is limited to 5 connected devices when not on LTE.
Broadcast Wi-Fi name:
Wi-Fi privacy separation:
If enabled, connected devices cannot communicate with each other.
Wi-Fi Multimedia (WMM):
WMM provides higher priority for multimedia and is mandatory if using 802.11n
Channel:
Automatic
Wi-Fi range:
Long range - shorter batt...
Adjust the area covered by the Wi-Fi network.
Devices connected to your Jetpack use data from your data plan. Performance may vary with the number of devices.
Save Changes
NOVATEL WIRELESS
powered by MiFi
MiFi 5510L

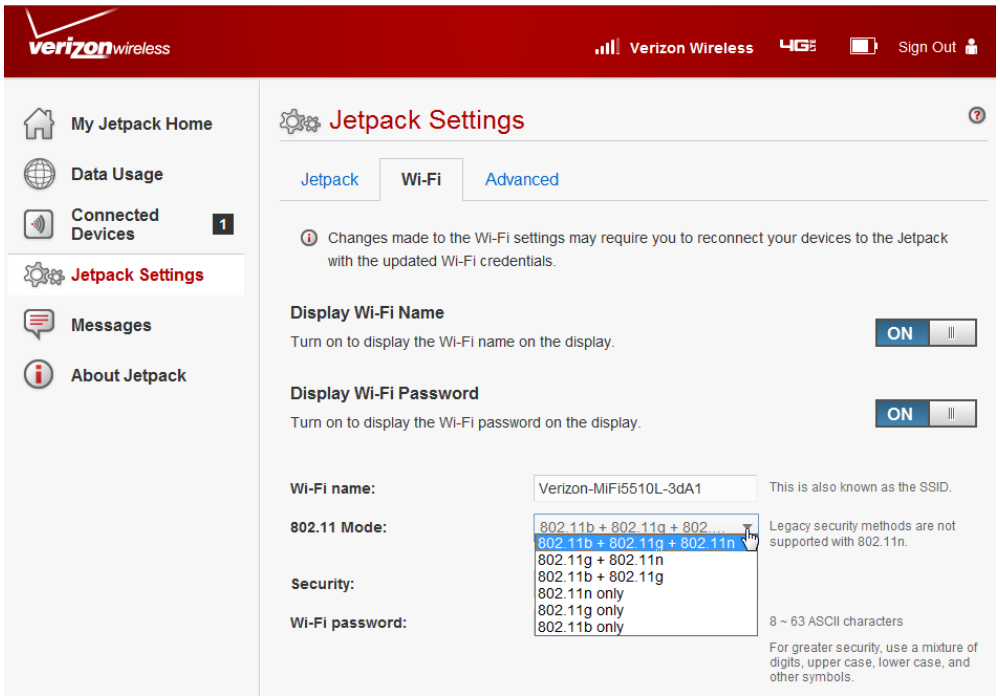
The Wi-Fi menu contains the following sections:

- **Display Wi-Fi Name** — Slide the **ON/OFF** button to **ON** to display the Wi-Fi name on the Jetpack display.
- **Display Wi-Fi Password** — Slide the **ON/OFF** button to **ON** to display the current Wi-Fi password on the Jetpack display.
- **Wi-Fi name** — The Network Name or SSID for the Wi-Fi network created by the Jetpack.
- **802.11 Mode** — Use this setting to change the Wi-Fi mode. The wireless network technology used. **802.11g + 802.11b + 802.11n** is most compatible, allowing both 802.11b, 802.11g, and 802.11n devices to connect to the wireless network.

- **Security** — Use this setting to select the desired type of Wi-Fi security used to encrypt the wireless network. WPA2 is the latest and most secure method and should be used whenever possible.
- **Wi-Fi Password** — Use this setting to enter your desired Wi-Fi password.
- **Maximum Wi-Fi connected devices** — Use this setting to specify how many devices can simultaneously connect to your Jetpack.
- **Broadcast Wi-Fi name** — If this setting is enabled, the Jetpack appears in the list of available Wi-Fi networks on your connected devices. If disabled, the network will be invisible.
- **Wi-Fi privacy separation** — If this setting is enabled, each connected device is isolated from all other connected devices. This provides additional security if some connected devices are unknown or not completely trusted. For normal operation, this option should be disabled.
- **Wi-Fi Multimedia (WMM)** — Wi-Fi Multimedia. Enables your device to stream multimedia files.
- **Channel** — This should be left on **Automatic** unless you need to choose a particular channel for your environment. With this setting, the Jetpack selects the best available channel. If the **Automatic** setting is not available, you can experiment to see which channel provides the best results, or use the default setting.
- **Wi-Fi Range** — This setting determines the range (and battery consumption) of the Wi-Fi module in the Jetpack. Select the desired option.

To change your Wi-Fi security, password and/or connection settings, follow these steps:

❶ Select the desired settings from the security, Wi-Fi password and/or available Wi-Fi connections drop down menu(s).



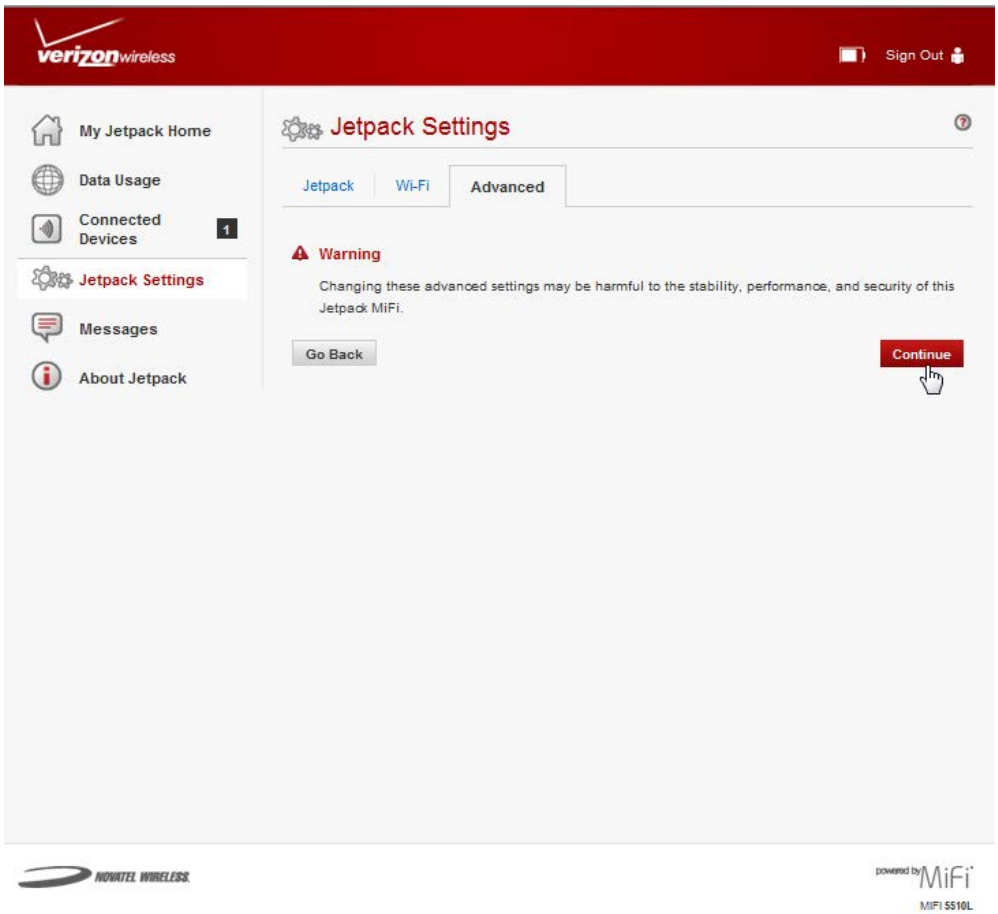
❷ Click **Save Changes** whenever you make a change to finalize and save the new setting.

Advanced

The Advanced page allows you to change the Jetpack advanced settings. The Advanced page provides network, manual DNS, SIM, firewall and LAN settings; and options for configuring port filtering applications.

IMPORTANT Changing the Jetpack's advanced settings can adversely affect stability, performance and security of the Jetpack.

Click **Continue** on the Advanced page to access Advanced page options.



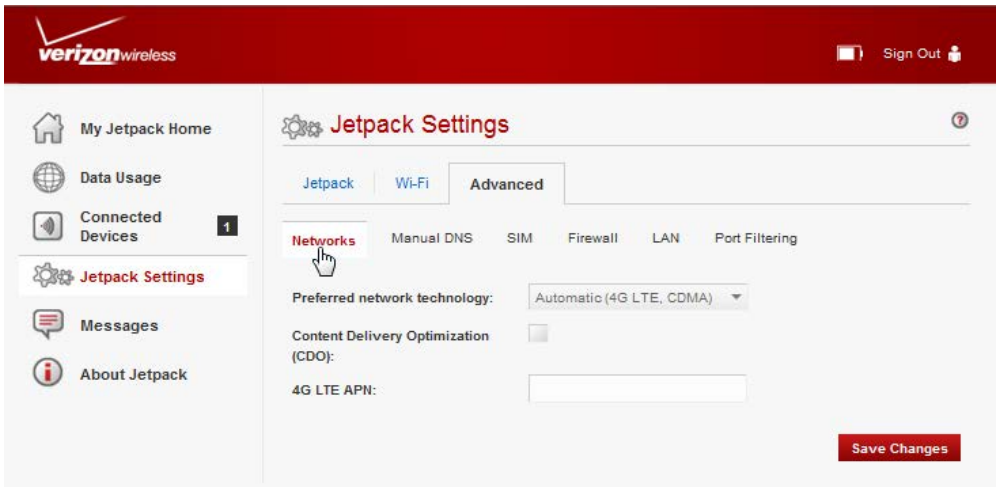
The Advanced page contains the following menu options:

- **Networks** (See Networks on page 54.)
- **Manual DNS** (See Manual DNS on page 55.)
- **SIM** (See SIM on page 56.)
- **Firewall** (See Firewall on page 57.)
- **LAN** (See LAN on page 58.)
- **Port Filtering** (See Port Filtering on page 59.)

Networks

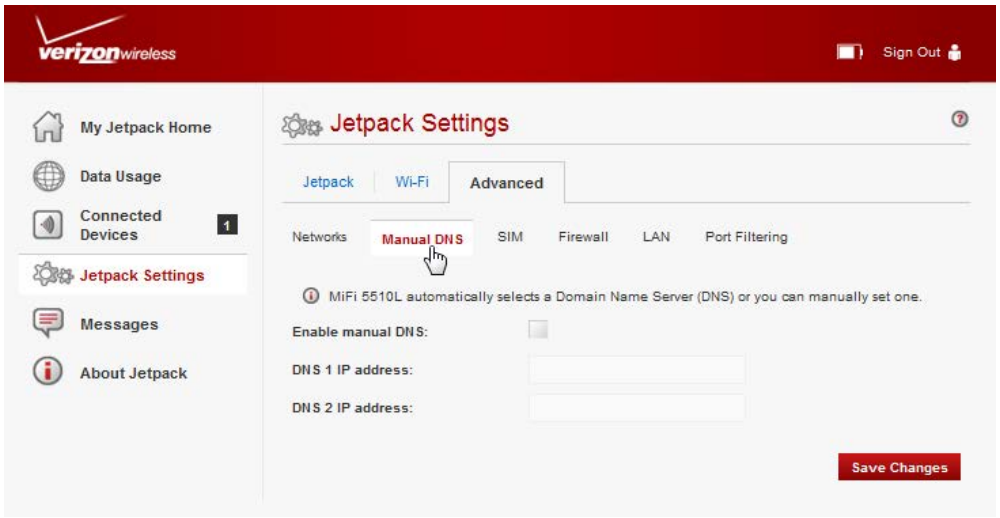
The Networks menu contains the following:

- **Preferred network technology** — The Preferred network technology default value is "Automatic". The Jetpack will select the best available technology. If desired, you can change this to limit the network technologies which will be used.
- **Content Delivery Optimization (CDO)** — The Content Delivery Optimization (CDO) feature provides better download performance, but can only assist one connected device at any time. Normally, this feature should be enabled.
- **4G LTE APN** — The 4G LTE APN is pre-configured to access the Verizon Wireless network. You should not change the APN unless you have a corporate account (with your own APN) or you change the SIM.
- **Save Changes** — Click **Save Changes** whenever you make a change to finalize and save the new setting.



Manual DNS

The Jetpack automatically selects a Domain Name Server (DNS). The Manual DNS menu allows you to manually select up to two DNS IP addresses.



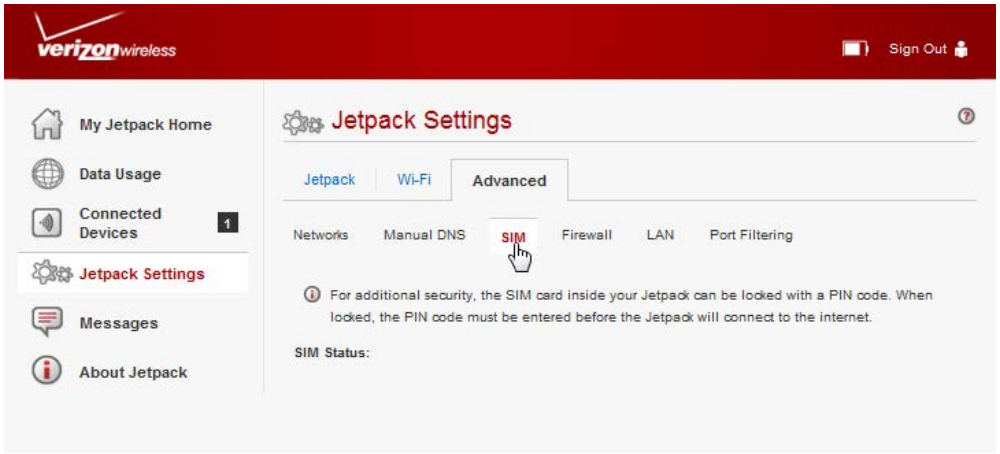
To manually select a Domain Name Server, follow these steps:

1. Click the box next to **Enable manual DNS**.
2. Enter the IP address for the first DNS in the **DNS 1 IP address** field.
3. Enter the IP address for the second DNS in the **DNS 2 IP address** field, if applicable.
4. Click **Save Changes**.

SIM

The SIM menu gives you settings and information about the Jetpack's SIM card. The SIM card inside your Jetpack can be locked with a PIN code for additional security. If locked, the PIN code must be entered before the Jetpack can connect to the Internet. The SIM menu takes you to the SIM page. The SIM page has the following option:

- **SIM Status** — Indicates the current SIM status, usually one of the following: no SIM, invalid SIM, PIN lock, PUK lock, ready, or SIM error.

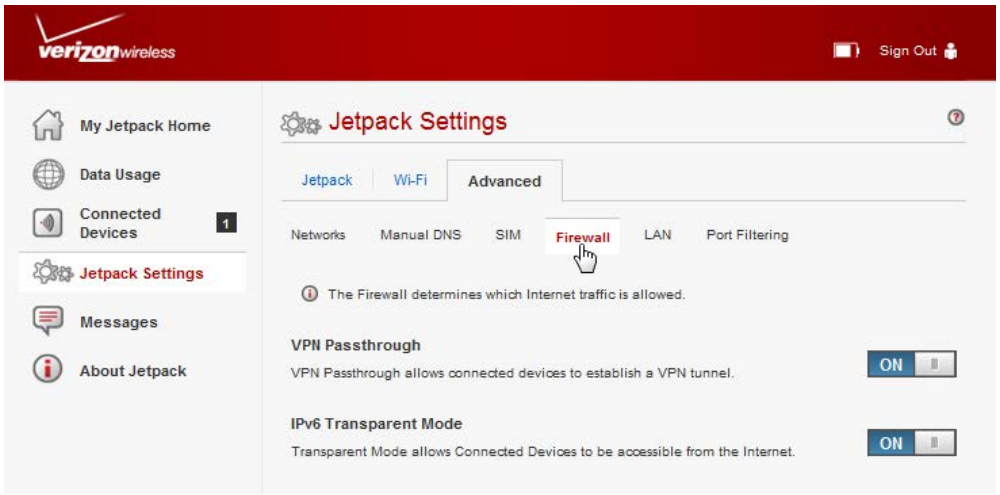


IMPORTANT Entering an incorrect PIN will lock the SIM.

Firewall

The Jetpack firewall determines which Internet traffic is allowed. The Firewall menu contains the following sections:

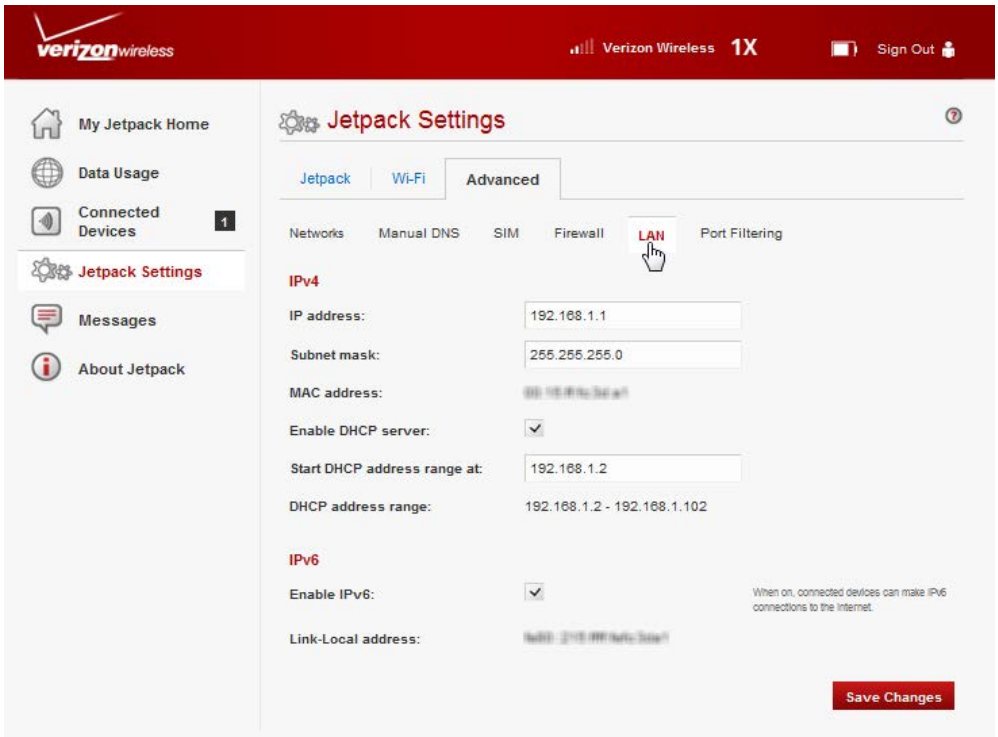
- **VPN Passthrough** — Enables or disables the VPN feature and allows or disallows connected devices to establish a VPN tunnel.
  - If this is **ON** (enabled), this feature allows VPN clients to connect through the Jetpack to remote VPN Servers. Normally, this option should be enabled.
  - If this is **OFF** (disabled), VPN clients are not allowed to connect.
- **IPv6 Transparent Mode** — Allows connected devices to be accessible from the Internet.



LAN

The LAN page gives you settings and information about the Jetpack's network. The LAN menu contains the following sections:

- **IPv4**
  - **IP address** — The IP address for the Jetpack.
  - **Subnet mask** — The subnet mask network setting for the Jetpack. The default value 255.255.255.0 is standard for small (class "C") networks. If you change the LAN IP Address, ensure you use the correct Subnet Mask for the IP address range containing the LAN IP address.
  - **MAC address** — The Media Access Controller (MAC) or physical address for the Jetpack.
  - **Enable DHCP server** — The **Enable DHCP Server** checkbox enables or disables the DHCP Server feature.
  - **Start DHCP address range at** — The start range of IP addresses reserved for use by the Jetpack's DHCP server table.
  - **DHCP address range** — The current range of IP addresses reserved for use by MiFi 5510L Jetpack's DHCP server table. If a device with a static IP address wants to connect to MiFi 5510L Jetpack's network, the static IP should be outside of the DHCP address range. Most devices do not have a static IP.
- **IPv6**
  - **Enable IPv6** — The **Enable IPv6** checkbox enables or disables the IPv6 feature.
  - **Link-Local address** — Displays the local address when IPv6 is enabled.



Port Filtering

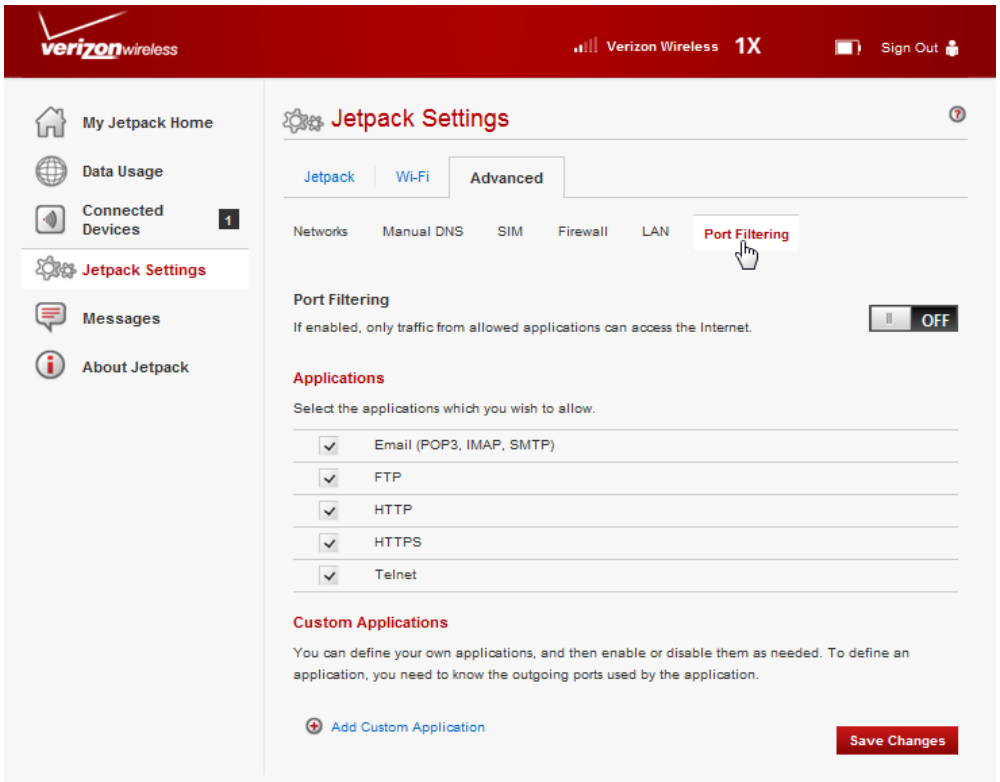
Port Filtering allows you to block outgoing Internet connections and permit only allowed applications to access the Internet. You can also customize a list of allowed applications which permits only certain programs to connect to the Internet.

Click **ON** to enable Port Filtering. When the feature is **enabled**, you must select a port filtering application in the **Applications** list to allow that application to connect to the Internet. For example, if you select VPN in the Applications list but do not select HTTP, you can connect to a VPN server but you cannot connect to a web page using your Internet browser.

Click **OFF** to disable Port Filtering. When the feature is **disabled**, any application can connect to the Internet.

The Port Filtering menu contains the following sections:

- **Applications** — Enable each port filtering application that needs to be able to access the Internet by checking the box next to one or more applications. When port filtering is enabled, all other applications are blocked.
- **Custom Applications** — You can define your own applications, and then enable or disable them as needed. To define an application, you need to know the outgoing ports used by the application.



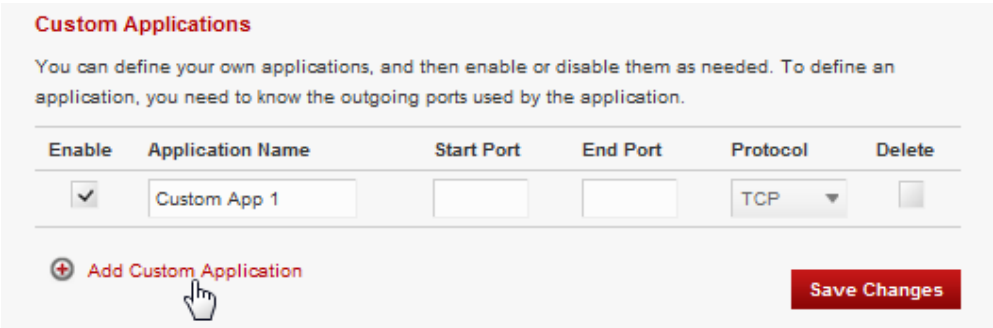
Add a Custom Application

To add a custom application, follow these steps:

1. Click **Add Custom Application** to add a new custom application to the list of allowed applications. You can define and enable custom Port Filtering applications. You need to know details of the traffic used and generated by the applications you wish to define.

   NOTE The **Add Custom Application** option is only available when the port filtering **Enable** checkbox is selected. You can add up to ten custom applications.

   The Custom Port Filtering page uses check boxes to enable port filtering for custom applications. Similar to the Applications list, you must enable custom applications so they can connect to the Internet.


Custom Applications
You can define your own applications, and then enable or disable them as needed. To define an application, you need to know the outgoing ports used by the application.
Enable
Application Name
Start Port
End Port
Protocol
Delete
Custom App 1
TCP
Add Custom Application
Save Changes

2. Enter the beginning of the range of port numbers used by outgoing traffic for the custom application being added in the **Start Port** field.
3. Enter the end of the range of port numbers in the **End Port** field. If the port is a single port instead of a range, type the same value for both the **Start Port** and the **End Port**.
4. Select the protocol (TCP, UDP, or both) used by each port range from the **Protocol** dropdown menu.
5. Click **Save Changes** to save any changes made to the custom applications.
6. Select the **Delete** checkbox next to any custom application you wish to delete and click **Save Changes**.

NOTE Click on the Port Filtering menu tab again to remove deleted custom applications from view on the screen.

Messages

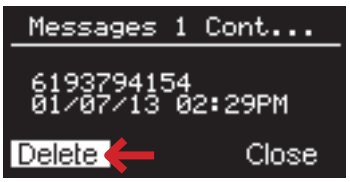
Messages display SMS messages sent to you by Verizon Wireless, and includes counters for the total number of messages and new messages.

On the Jetpack Device

The status bar on the Home screen displays the number of unread messages to the right of the Messages icon.

1. To view your messages, press the select button on the Home screen to display the Menu screen.
2. Use the navigation button to scroll to the Messages icon and press the select button to open the Messages screen and display the first message.
3. Use the navigation button to scroll through and display your messages. Unread messages will display an envelope icon at the top right corner of the message screen. Once a message has been read, the envelope icon will disappear and the message will be saved until you delete it.
4. To display the message sender's address, and the date and time the message was sent, select **More.**

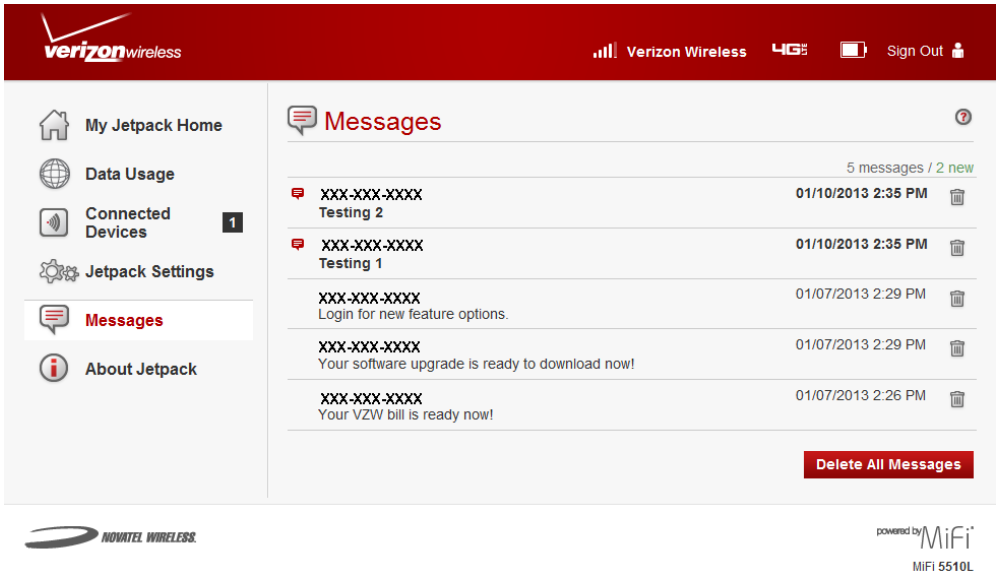
5. To delete a message, use the navigation button to highlight **Delete**, then press the select button. You will be prompted with the confirmation message: "**Are you sure you want to delete this message?**" Use the navigation button to highlight **Delete**, then press the select button to complete the deletion.



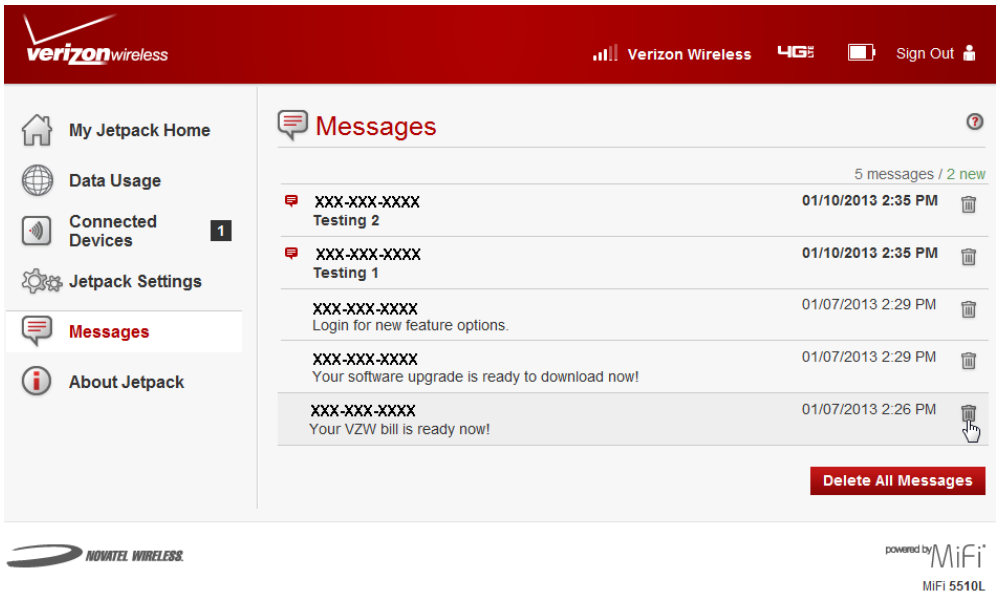
6. Use the navigation button to highlight **Close** and press the select button to close the message and return to the Menu screen.

On the Jetpack Web Interface

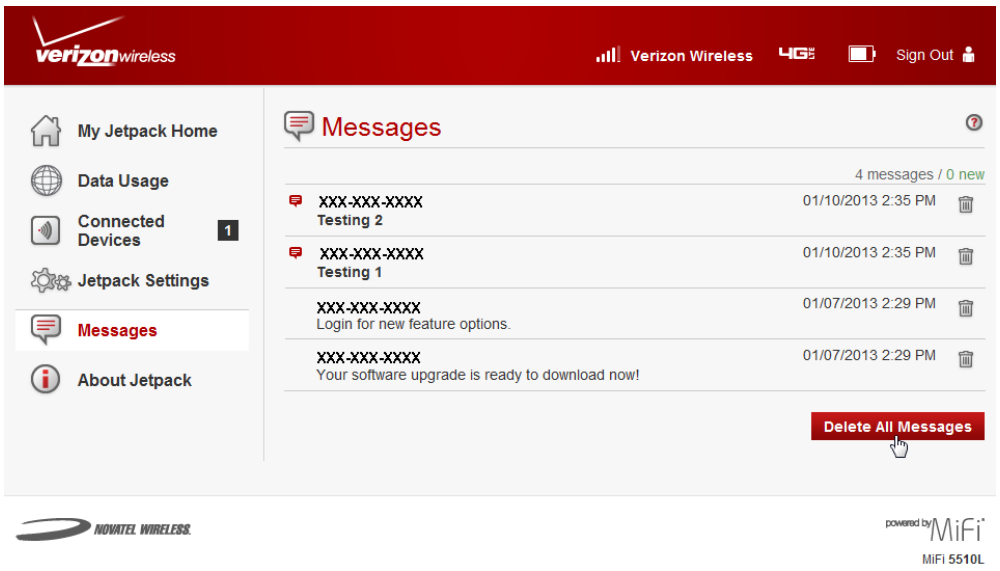
The Messages page displays the total number of messages, number of new messages and the messages themselves. You can also delete messages individually or all messages at the same time.



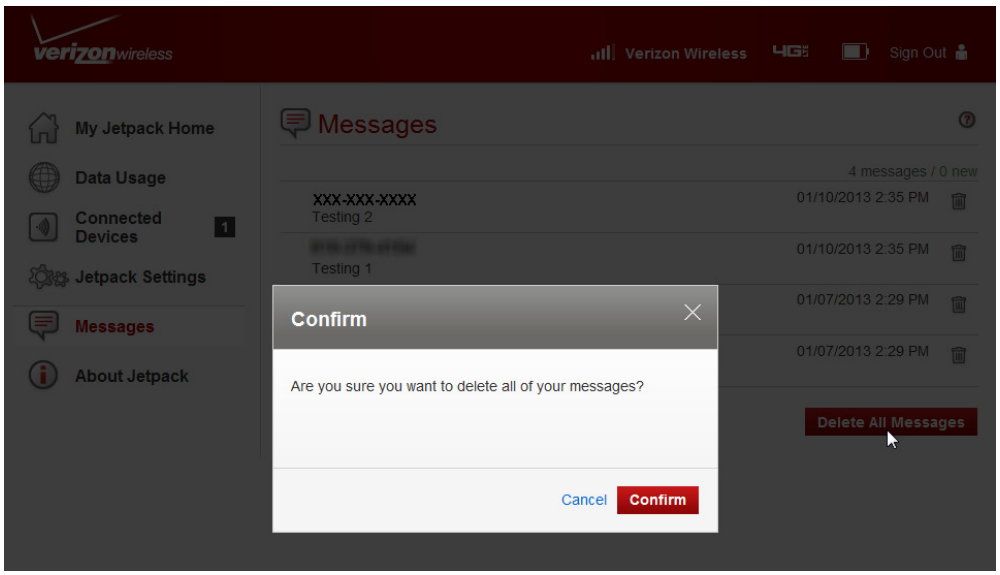
❶ To delete a selected message, click the garbage can icon to the right of the message date and time.



❷ To delete all messages, click **Delete All Messages**.



❸ You will be prompted with the Confirm message: "**Are you sure you want to delete all of your messages?**" Click **Confirm** to delete all messages, or **Cancel** to keep your messages and return to the Messages page.

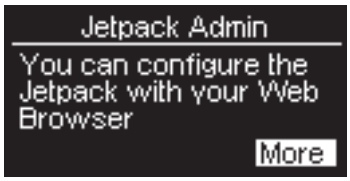


About Jetpack

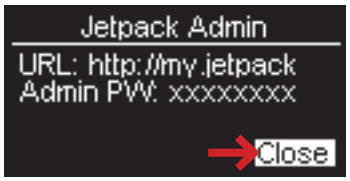
About Jetpack allows you to view detailed device specific information about your Jetpack.

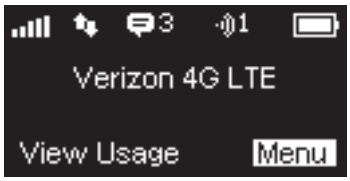
On the Jetpack Device

1. To view detailed information about your Jetpack, press the select button on the Home screen to display the Menu screen.
2. Use the navigation button to scroll to the About Jetpack icon and press the select button to open the About Jetpack screen and display your mobile phone, model, and IMEI numbers.
3. Select **More > More** to display the Jetpack Admin screen showing the website UI address and Admin Password.



4. Select **Close** to return to the Jetpack Menu screen.
5. Use the navigation button to scroll to the Jetpack Home icon, and press Go Home to display the Home page.

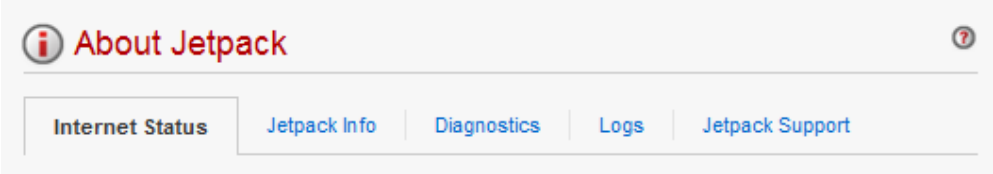




On the Jetpack Web Interface

The About Jetpack page allows you to view detailed information about Jetpack internet status, device specific information, diagnostics, troubleshooting and support. The About Jetpack page contains the following menu options:

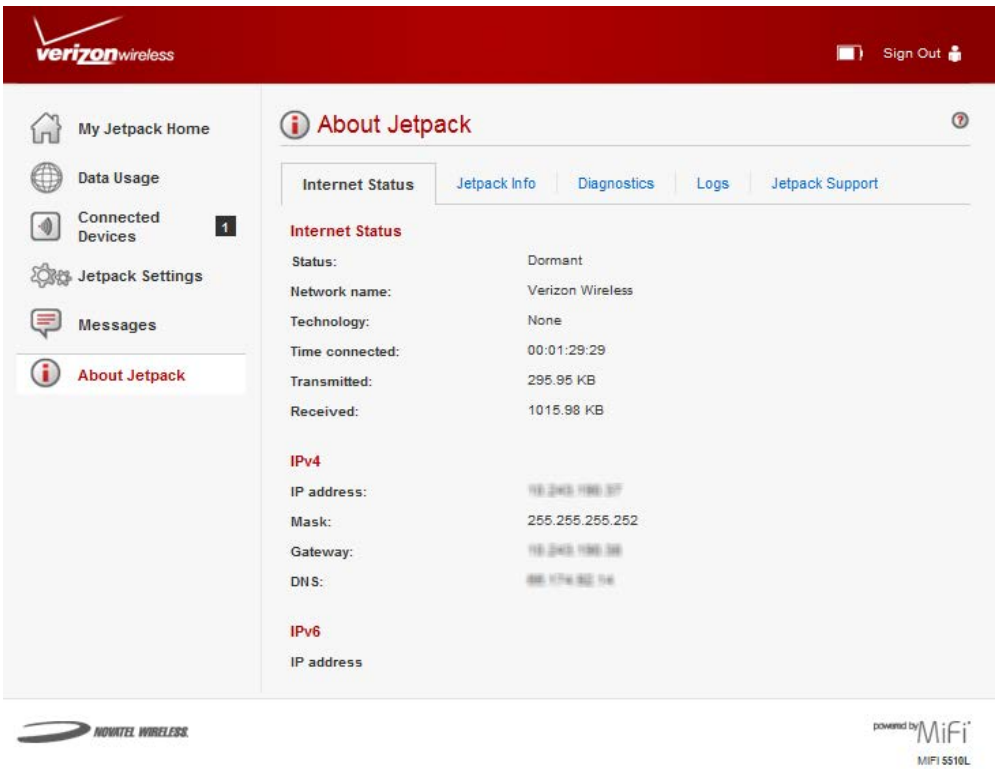
- **Internet Status** (See Internet Status on page 65.)
- **Jetpack Info** (See Jetpack Info on page 67.)
- **Diagnostics** (See Diagnostics on page 68.)
- **Logs** (See Logs on page 72.)
- **Jetpack Support** (See Jetpack Support on page 74.)



Internet Status

The Internet Status page shows Jetpack settings and status and contains the following sections:

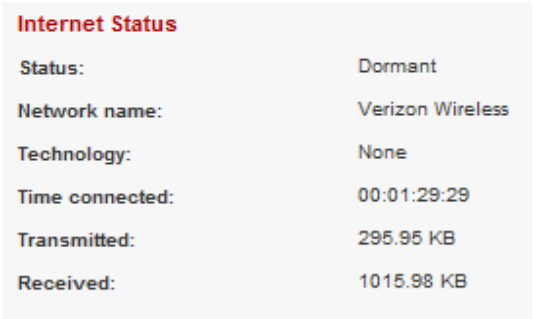
- **Internet Status** (See Internet Status on page 66.)
- **IPv4** (See IPv4 on page 66.)
- **IPv6** (See IPv6 on page 66.)



Internet Status

The Internet Status section has the following options:

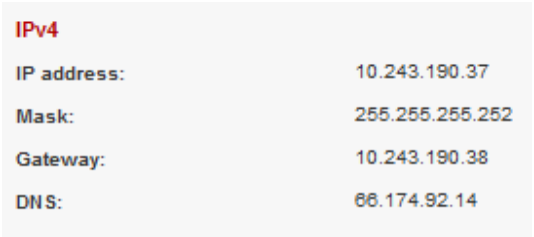
- **Status** — The status of the Internet connection, usually **Connected** or **Disconnected**.
- **Network name** — The name of the network to which this Jetpack is currently connected.
- **Technology** — The type of technology used to connect to the Internet.
- **Time connected** — How long the Jetpack has been connected to the network.
- **Transmitted** — The amount of data sent to the network.
- **Received** — The amount of data received from the network.



IPv4

The IPv4 section has the following options:

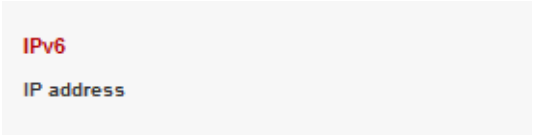
- **IP Address** — The IP address for the Jetpack.
- **Mask** — The subnet mask network setting for the Jetpack. The default value 255.255.255.0 is standard for small (class "C") networks. If you change the LAN IP Address, ensure you use the correct Subnet Mask for the IP address range containing the LAN IP address.
- **Gateway** — The address of the server used to access the Internet.
- **DNS** — The address of the Domain Name Server (DNS).



IPv6

The IPv6 section has the following option:

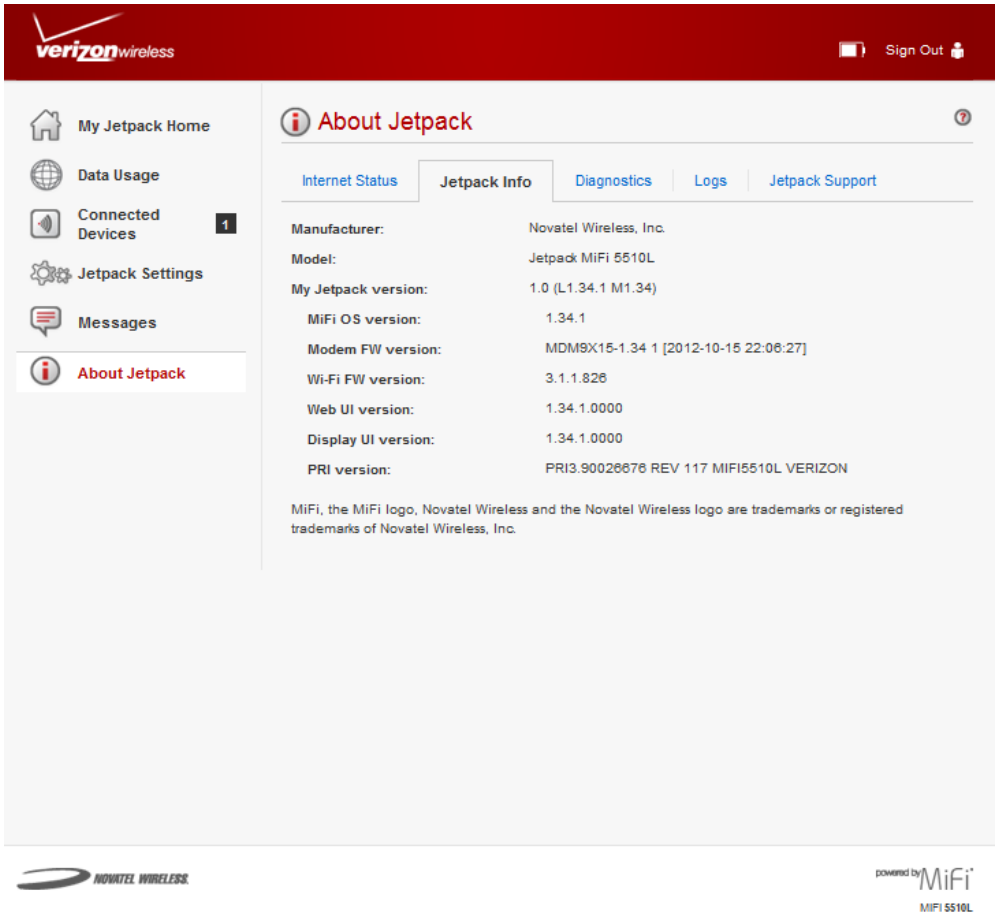
- **IP address** — The IP address for the Jetpack.



Jetpack Info

The Jetpack Info page contains detailed information about the Jetpack. The Jetpack Info page contains the following sections:

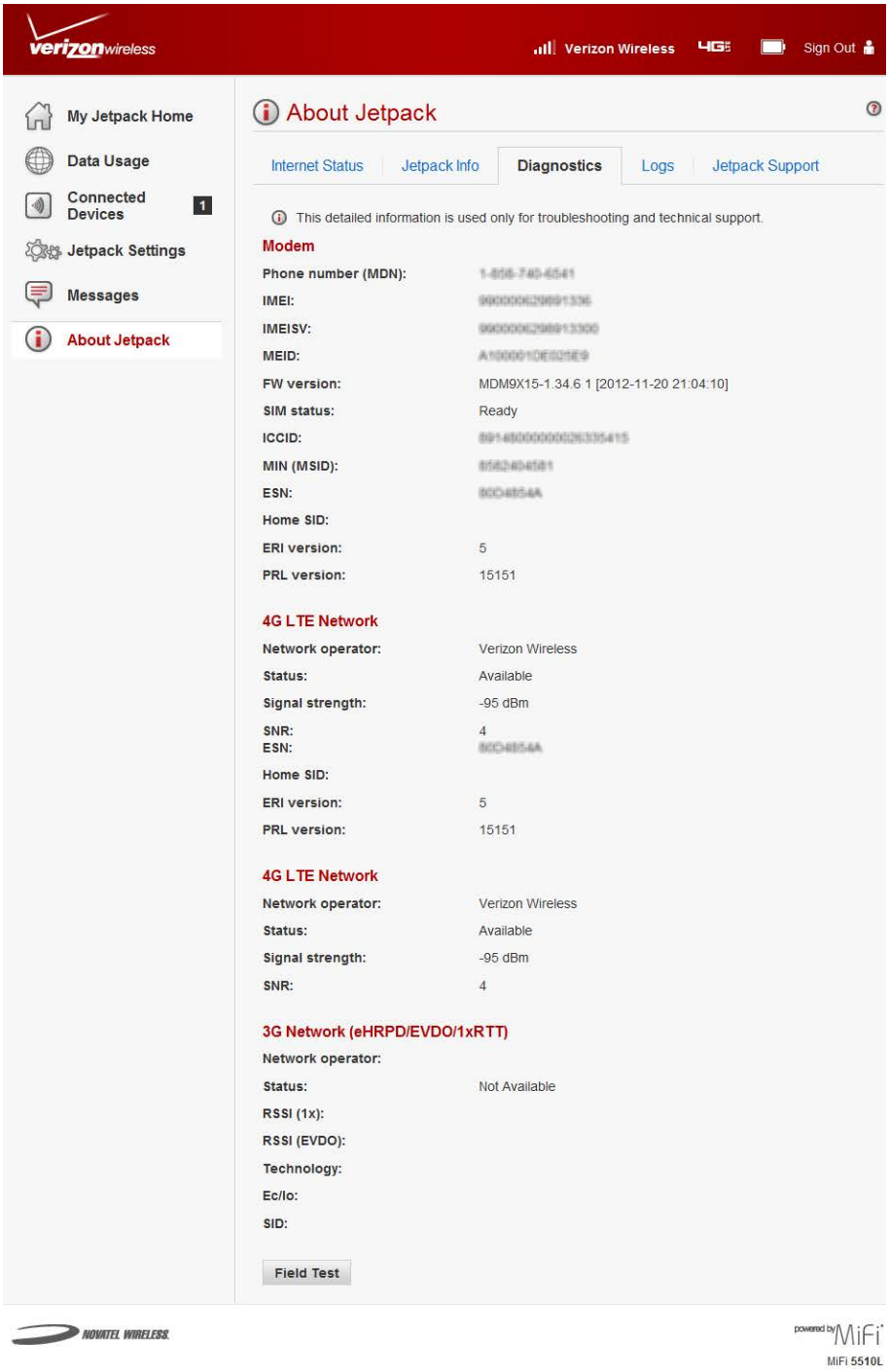
- **Manufacturer** — The manufacturer of the Jetpack.
- **Model** — The model number or name of the Jetpack.
- **My Jetpack version** — The Jetpack version.
  - **MiFi OS version** — The Jetpack operating system (OS), including its components, version.
  - **Modem FW version** — The modem firmware version.
  - **Wi-Fi FW version** — The Wi-Fi firmware version.
  - **Web UI version** — The web user interface version.
  - **Display UI version** — Displays the current user interface version.
  - **PRI version** — Displays the configuration version currently applied to the Jetpack.



Diagnostics

The Diagnostics page shows information about the MiFi 5510L Jetpack firmware and other system-level information. You can also view the system log. This page is used mostly for troubleshooting and is not required for normal operation. The Diagnostics page contains the following sections:

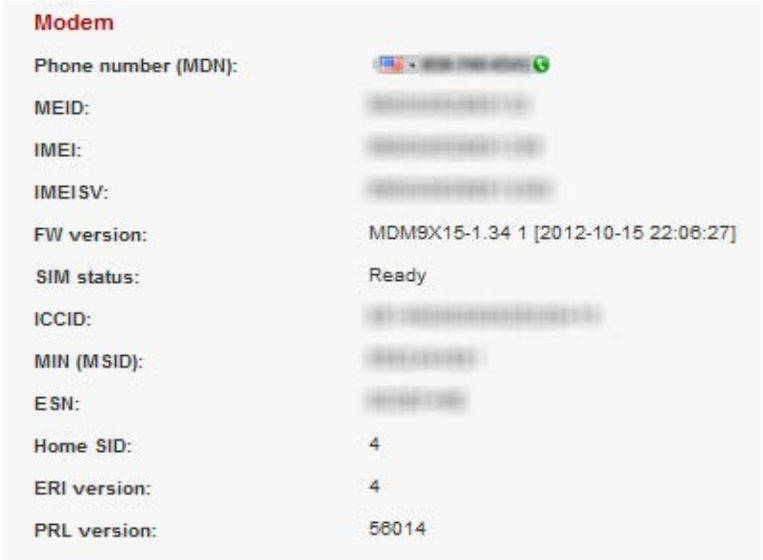
- **Modem** (See Modem on page 69.)
- **4G LTE Network** (See 4G LTE Network on page 70.)
- **3G Network (eHRPD/EVDO/1xRTT)** (See 3G Network (eHRPD/EVDO/1xRTT) on page 70.)
- **Field Test** (See Field Test on page 71.)



Modem

The Modem section has the following options:

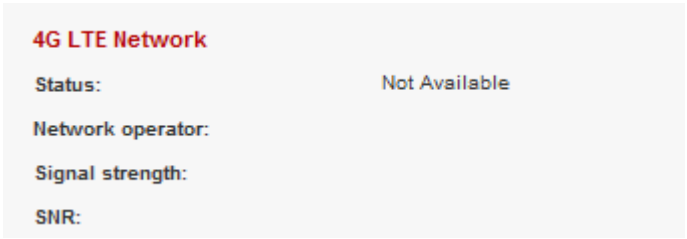
- **Phone number (MDN)** — The Phone Number or Mobile Directory Number (MDN) is used by the mobile data network to identify this particular data service.
- **MEID** — The Mobile Equipment Identifier (MEID) is used by the mobile data network to identify this particular modem.
- **IMEI** — The International Mobile Equipment Identity (IMEI) number for the Jetpack.
- **IMEISV** — The International Mobile Equipment Identity (IMEI) combined with an approval number for the Jetpack.
- **FW version** — The modem firmware version.
- **SIM status** — Status of the SIM card. If the SIM card is missing, or this field indicates some form of SIM error, the MiFi Jetpack will not be able to connect to the mobile network.
- **ICCID** — The ID number assigned to the SIM Card.
- **MIN (MSID)** — The Mobile Identification Number (MIN) or Mobile Station ID (MSID) is the number associated with the home service provider and the wireless phone number.
- **ESN** — The Electronic Serial Number, which is either blank or a pseudo-ESN which is not guaranteed to be unique for devices that use an MEID.
- **Home SID** — System identifier for the home network.
- **ERI version** — The Enhanced Roaming Indicator version that is currently installed.
- **PRL version** — The version of the Preferred Roaming List (PRL), which tells the modem which non-home carrier towers should provide roaming coverage.



4G LTE Network

The 4G LTE Network section has the following options:

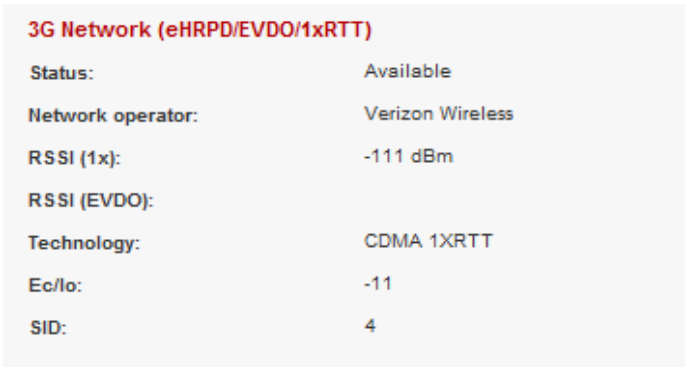
- **Status** — Status of the network (Disabled, Not available, or Available).
- **Network operator** — The vendor that currently provides wireless access.
- **Signal strength** — Indicates the signal strength for LTE.
- **SNR** — A measure of signal quality; the higher the number the better the signal.



3G Network (eHRPD/EVDO/1xRTT)

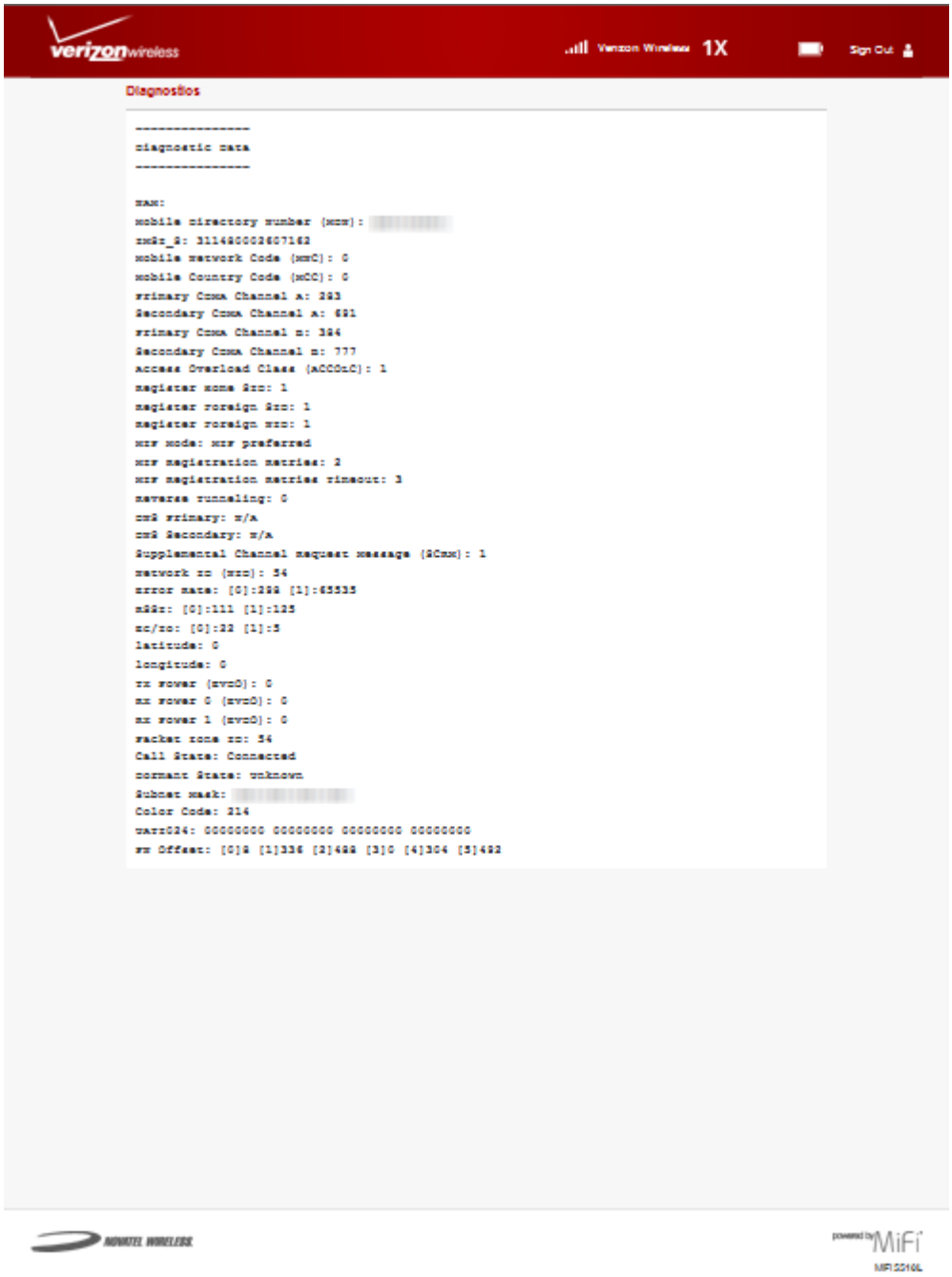
The 3G Network (eHRPD/EVDO/1xRTT) section has the following options:

- **Status** — Status of the network (Disabled, Not available, or Available).
- **Network operator** — The vendor that currently provides wireless access.
- **RSSI (1x)** — Indicates the RSSI for the 1xRTT signal.
- **RSSI (EVDO)** — Indicates the signal strength for the EVDO/eHRPD signal.
- **Technology** — The type of technology used to connect to the Internet.
- **Ec/Io** — A measure of how clean the signal is, and is a type of signal-to-noise ratio.
- **SID** — System identifier for the network.



Field Test

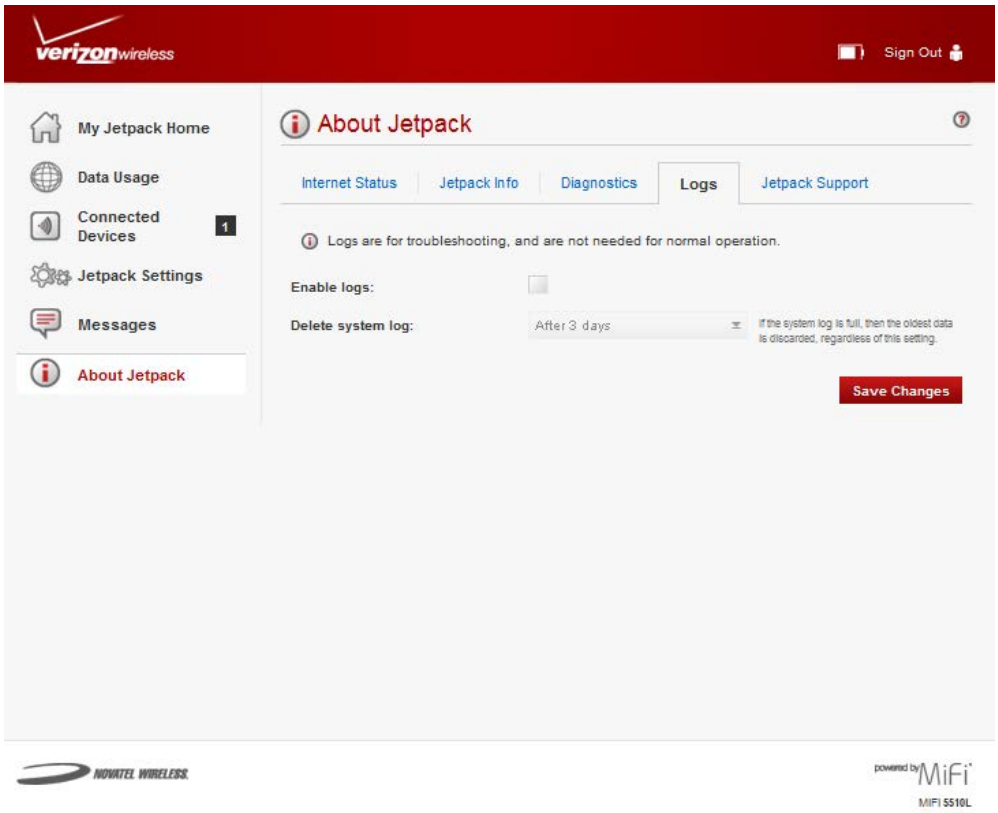
Click on **Field Test** to provide a list of low-level network parameters which can be helpful for technical support staff when they troubleshoot network connectivity issues.



Logs

The Logs page allows you to enable or disable logs and to delete system logs.

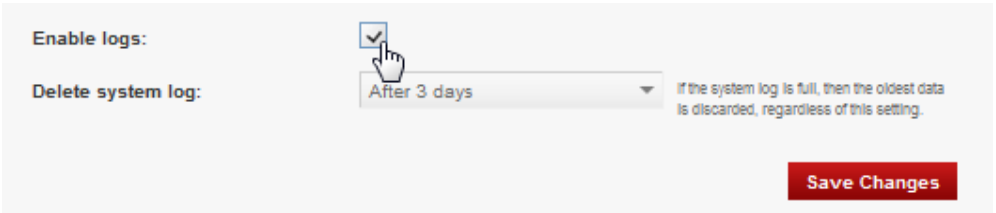
NOTE Logs record various operations and are used for troubleshooting and are not needed for normal Jetpack operation.



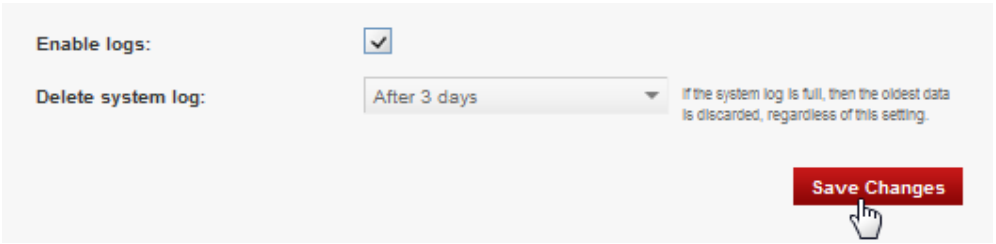
Enable System Logs

To enable system logs, follow these steps:

❶ Select the checkbox next to **Enable logs**.


Enable logs:
Delete system log:
After 3 days
If the system log is full, then the oldest data is discarded, regardless of this setting.
Save Changes

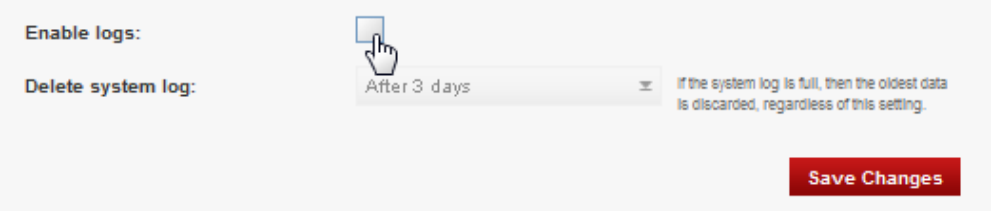
❷ Click **Save Changes**.


Enable logs:
Delete system log:
After 3 days
If the system log is full, then the oldest data is discarded, regardless of this setting.
Save Changes

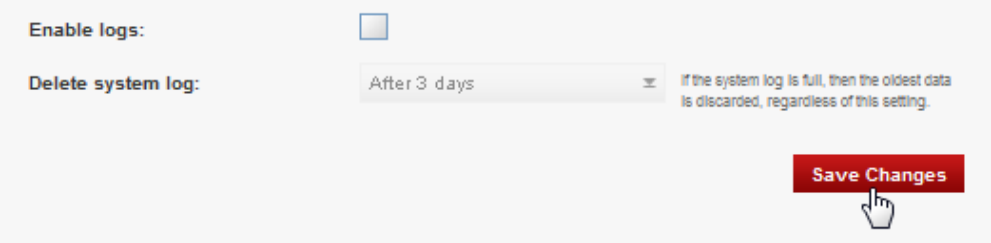
Disable System Logs

To disable system logs, follow these steps:

1. Deselect the checkbox next to **Enable logs**.


Enable logs:
Delete system log:
After 3 days
If the system log is full, then the oldest data is discarded, regardless of this setting.
Save Changes

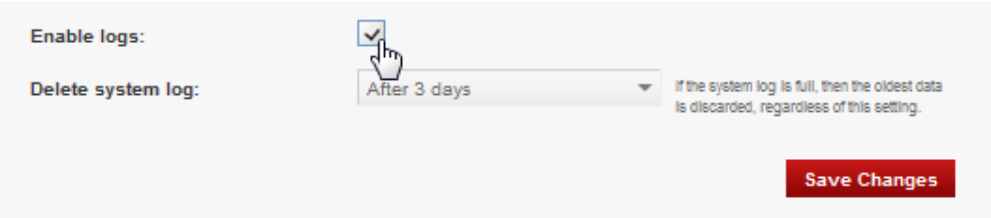
2. Click **Save Changes**.


Enable logs:
Delete system log:
After 3 days
If the system log is full, then the oldest data is discarded, regardless of this setting.
Save Changes

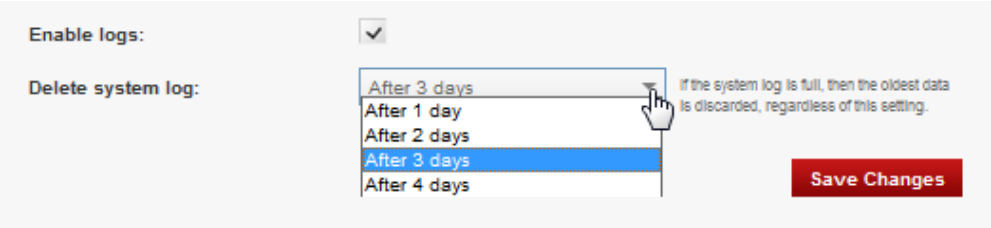
Delete System Log

To delete a system log, follow these steps:

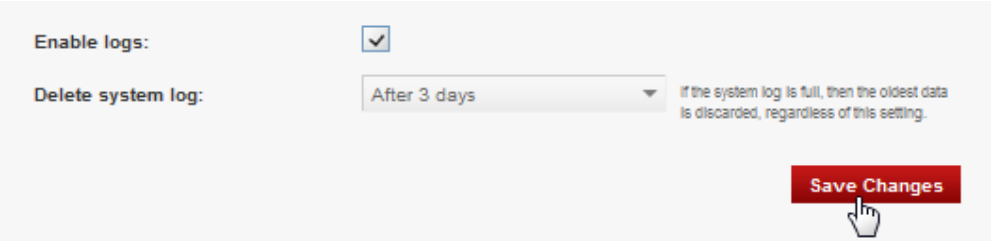
1. Select the checkbox next to **Enable logs**.


Enable logs:
Delete system log:
After 3 days
If the system log is full, then the oldest data is discarded, regardless of this setting.
Save Changes

2. Select the appropriate time period for the deletion of system logs from the dropdown menu next to **Delete system log**.


Enable logs:
Delete system log:
After 3 days
After 1 day
After 2 days
After 3 days
After 4 days
If the system log is full, then the oldest data is discarded, regardless of this setting.
Save Changes

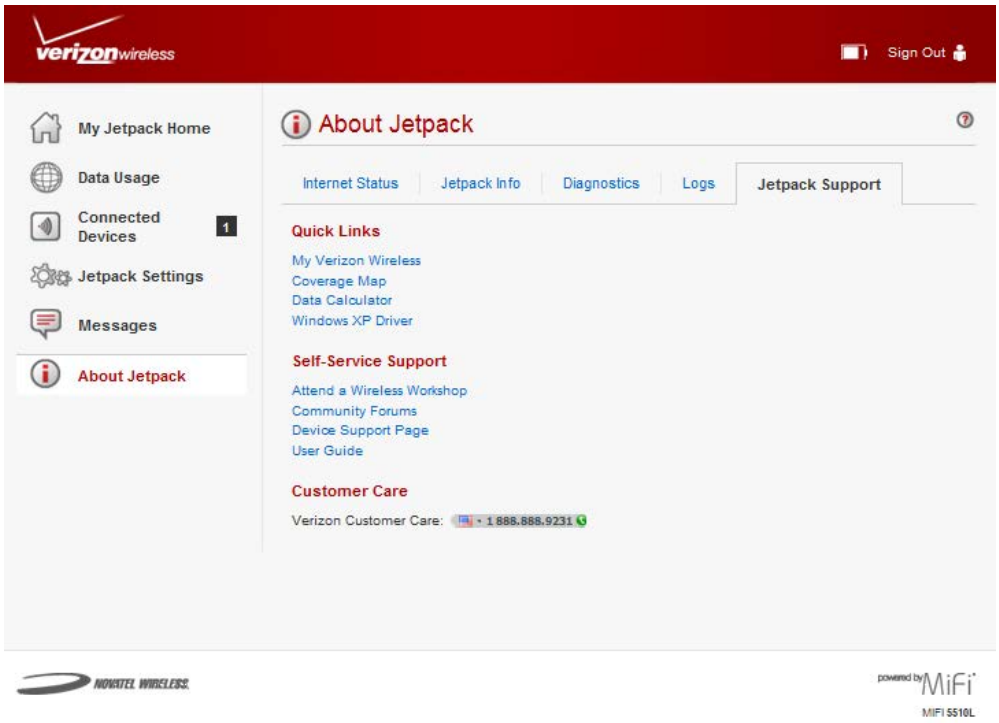
3. Click **Save Changes**.


Enable logs:
Delete system log:
After 3 days
If the system log is full, then the oldest data is discarded, regardless of this setting.
Save Changes

Jetpack Support

The Jetpack Support page contains the following sections:

- **Quick Links** (See Quick Links on page 74.)
- **Self-Serve Support** (See Self-Serve Support on page 75.)
- **Customer Care** (See User Guide — Click on User Guide to access an online version of the Jetpack User Guide. You can also open your browser and type http://my.jetpack/.Customer Care on page 65.)



Quick Links

The Quick Links section has the following options:

- **My Verizon Wireless** — **My Verizon Wireless** allows you to manage your account, pay your bill, purchase accessories and more. Click on **My Verizon Wireless** to register or go to www.verizonwireless.com/myverizon.
- **Coverage Map** — Displays the Verizon Wireless coverage area. You can also open your browser and type http://my.jetpack/.
- **Data Calculator** — Displays up-to-date information on your data usage. You can also open your browser and type http://my.jetpack/.
- **Windows XP Driver** — **Windows XP Driver** allows you to download the driver for Windows XP. This driver is only needed if you use a USB cable to connect the Jetpack to a Windows XP computer.

Self-Serve Support

The Self-Serve Support section has the following options:

- **My Verizon Wireless** — Click on **Attend a Wireless Workshop** to attend a free Wireless Workshop online or in a store to learn everything you need to know about your Jetpack. (You can also open your browser and type https://vzwworkshops.verizonwireless.com/vzwworkshops/.)
- **Community Forums** — Click on **Community Forums** to follow, share and participate in the Broadband & Netbook Community. In addition, you can search Broadband & Netbook Community discussions for specific topics. (You can also open your browser and type https://community.verizonwireless.com/community/broadband.)
- **Device Support Page** — Click on **Device Support Page** to join and discuss the latest news in Verizon Wireless products, services, and more. (You can also open your browser and type https://community.verizonwireless.com/welcome.)
- **User Guide** — Click on **User Guide** to access an online version of the Jetpack User Guide. (You can also open your browser and type http://my.jetpack/Customer Care.)

Contact Verizon Customer Service by calling **800-922-0204** or by visiting www.verizonwireless.com/support.

4

Troubleshooting

Overview
Common Problems and Solutions
Technical Support

Overview

When properly installed, the Jetpack is a highly reliable product. Most problems are caused by one of these issues:

- System resources required by the Jetpack are being used by other devices.
- Network coverage is unavailable due to coverage area, an account problem, or a network problem.

The following tips can help solve many common problems encountered while using the Jetpack.

First Steps

- Make sure you are using the Jetpack in the correct geographic region.
- Ensure that your wireless coverage extends to your current location.
- Ensure you have an active subscription plan.
- Restarting your computer and your Jetpack can resolve many issues.

IMPORTANT Before contacting support, be sure to restart both your computer and your Jetpack.

Common Problems and Solutions

The following are some common problems and solutions.

My Jetpack just powered off without my pressing the power button. Why?

This may occur under any of the following circumstances.

- Pressing the Master Reset button
- Restarting the Jetpack
- Switching profiles
- Restoring the configuration settings
- Battery depletion

To restore battery power, follow these steps.

1. Manually press and hold the power button to turn it back on.
2. If the battery is depleted, charge the Jetpack with the wall charger.

How do I reset the Jetpack back to factory settings?

The master reset button is in a small hole located on the bottom of the Jetpack, underneath the battery cover. This button returns the Jetpack to factory settings, including re-setting the network name (SSID) and network key (Wi-Fi passkey). To reset the Jetpack, follow these steps.

1. Place one end of an unfolded paper clip into the master reset button hole.
2. Press the paper clip on the button until the display shows "MiFi Powering Off" (about five to six seconds), then your Jetpack will restart.

WARNING! The "Reset to Factory Defaults" operation overwrites ALL existing settings. If the Wi-Fi settings change, you will lose this connection, and need to reconnect using the new settings.

How do I reset the Access Point and Router settings back to factory settings?

To reset the access point and router settings, follow these steps.

1. Connect to Jetpack Settings by connecting your computer to the MiFi wireless network and going to http://my.jetpack/ or http://192.168.1.1 in your browser.
2. Connect to the Jetpack Backup and Restore page. (See Backup and Restore on page 51.) The Backup and Restore page has a **Restore to Factory Defaults** button. This button resets all Access Point and Router settings to their factory default values. All existing settings are lost.

Technical Support

IMPORTANT Before contacting support, be sure to re-start both your computer and the Jetpack.

Technical Support

For additional information and technical support, contact Customer Service at **1-800-922-0204** or at any Verizon Wireless store.

5

Product Specifications and Regulatory Information

Product Specifications
Regulatory Statements
Wireless Communications
Limited Warranty and Liability
Safety Hazards
Proper Battery Use and Disposal

Product Specifications

General

Name:	Verizon Jetpack 4G LTE Mobile Hotspot MiFi 5510L
Model:	MiFi 5510L
Approvals:	FCC (North America)
Weight:	94 g / 3.3 oz
Dimensions:	100 mm x 62 mm x 16.4 mm, 3.94 in x 2.44 in x 0.65 in
Wireless Network – Tri Mode:	LTE, CDMA
Wireless Network – Wi-Fi Mode	802.11 b/g/n
Default SSID	Verizon-MiFi5510L-XXXX
Battery	
• Size • Time required for full charge	1800 mAh 3-3.5 hours (when not in use)
Chip Set:	QUALCOMM® MDM9615
Interface Type:	Type B USB Port for Micro USB, used by the wall charger

Technology/Bands

Technology:	LTE, CDMA 1X/EV-DO Rev 0/A
Band Designation:	LTE 700 MHz CDMA 1x/EV-DO RA; 800/1900 MHz
LTE Transmit Band:	746-763 MHz/1720-1755 MHz
LTE Receive Band:	776-793 MHz/2110-2155 MHz
CDMA Transmit Band:	824.7-848.31 MHz/1851.25-1908.75 MHz
CDMA Receive Band:	869.7-893.31 MHz/1931.25-1988.75 MHz

Environmental

Operating Temperature:	-10 ° C to +45° C (14°F to 113° F)
Storage Temperature:	-20° C to 55° C (-4° F to 131° F)
Drop:	1 meter (3.28 feet) drop, no damage – fully operational
Vibration Stability:	5 Hz to 500 Hz, 0.1 octave/second

Regulatory Statements

Federal Communications Commission Notice (FCC – United States)

Electronic devices, including computers and wireless modems, generate RF energy incidental to their intended function and are therefore subject to FCC rules and regulations.

This equipment has been tested to, and found to be within the acceptable limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment.

This equipment generates radio frequency energy and is designed for use in accordance with the manufacturer's user manual. However, there is no guarantee that interference will not occur in any particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions.

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

WARNING: DO NOT ATTEMPT TO SERVICE THE WIRELESS COMMUNICATION DEVICE YOURSELF. SUCH ACTION MAY VOID THE WARRANTY. THE JETPACK MODEM IS FACTORY TUNED. NO CUSTOMER CALIBRATION OR TUNING IS REQUIRED. CONTACT NOVATEL WIRELESS TECHNICAL SUPPORT FOR INFORMATION ABOUT SERVICING YOUR WIRELESS COMMUNICATION DEVICE.

FCC CAUTION: Any changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

MODIFICATIONS: The FCC requires that you be notified that any changes or modifications made to this device that are not expressly approved by Novatel Wireless, Inc. may void your authority to operate the equipment.

NOTE: The Radio Frequency (RF) emitter installed in your modem must not be located or operated in conjunction with any other antenna or transmitter, unless specifically authorized by Novatel Wireless Technologies.

RF Exposure Content

FCC Equipment Authorization ID: **PKRNVWMIFI5510**

This device is authorized for use in mobile and portable applications.

This product has been evaluated for SAR and meets the FCC Guidelines for exposure to radio waves.

For better signal reception, coverage range and data throughput, do not place the router near any physical obstruction, including in a pocket or in close proximity of any object. For RF Safety, a mandatory minimum of 10 mm (1 cm) should be maintained between the device and any part of a human body when using the device. Increasing the separation between the device and the body will result in better reception and reduced exposure to radio energy.

Wireless Communications

IMPORTANT Due to the transmission and reception properties of wireless communications, data occasionally can be lost or delayed.

This can be due to the variation in radio signal strength that results from changes in the characteristics of the radio transmission path. Although data loss is rare, the environment where you operate the modem might adversely affect communications.

Variations in radio signal strength are referred to as fading. Fading is caused by several different factors including signal reflection, the ionosphere, and interference from other radio channels.

Novatel Wireless or its partners will not be held responsible for damages of any kind resulting from the delays or errors in data transmitted or received with the MiFi 5510L Jetpack device, or failure of the MiFi 5510L Jetpack device to transmit or receive such data.

Limited Warranty and Liability

Novatel Wireless, Inc. warrants for the 12-month period immediately following receipt of the Product by Purchaser that the Product will be free from defects in material and workmanship under normal use. THESE WARRANTIES ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The exclusive remedy for a claim under this warranty shall be limited to the repair or replacement, at Novatel Wireless' option, of defective or non-conforming materials, parts or components. The foregoing warranties do not extend to (I) non conformities, defects or errors in the Products due to accident, abuse, misuse or negligent use of the Products or use in other than a normal and customary manner, environmental conditions not conforming to Novatel Wireless' specification, of failure to follow prescribed installation, operating and maintenance procedures, (II) defects, errors or nonconformities in the Product due to modifications, alterations, additions or changes not made in accordance with Novatel Wireless' specifications or authorized by Novatel Wireless, (III) normal wear and tear, (IV) damage caused by force of nature or act of any third person, (V) shipping damage, (VI) service or repair of Product by the purchaser without prior written consent from Novatel Wireless, (VII) products designated by Novatel Wireless as beta site test samples, experimental, developmental, reproduction, sample, incomplete or out of specification Products, or (VIII) returned products if the original identification marks have been removed or altered.

Safety Hazards

Do not operate the MiFi 5510L Jetpack in an environment that might be susceptible to radio interference resulting in danger, specifically:

Areas where prohibited by the law

Follow any special rules and regulations and obey all signs and notices. Always turn off the host device when instructed to do so, or when you suspect that it might cause interference or danger.

Where explosive atmospheres might be present

Do not operate your device in any area where a potentially explosive atmosphere might exist. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Be aware and comply with all signs and instructions.

Users are advised not to operate the device while at a refueling point or service station. Users are reminded to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. Potential locations can include gas stations, below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Near medical and life support equipment

Do not operate your device in any area where medical equipment, life support equipment, or near any equipment that might be susceptible to any form of radio interference. In such areas, the host communications device must be turned off. The device can transmit signals that could interfere with this equipment.

On an aircraft, either on the ground or airborne

In addition to FAA requirements, many airline regulations state that you must suspend wireless operations before boarding an airplane. Please ensure that the modem is turned off prior to boarding aircraft in order to comply with these regulations. The modem can transmit signals that could interfere with various onboard systems and controls.

While operating a vehicle

The driver or operator of any vehicle should not operate a wireless data device while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some countries, operating such communications devices while in control of a vehicle is an offense.

Electrostatic discharge (ESD)

Electrical and electronic devices are sensitive to electrostatic discharge (ESD). Macintosh native connection software might attempt to reinitialize the device should a substantial electrostatic discharge reset the device. If the software is not operational after an ESD occurrence, then restart your computer.

Proper Battery Use and Disposal

IMPORTANT In event of a battery leak:

- Do not allow the liquid to come in contact with the skin or the eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice.
- Seek medical advice immediately if a battery has been swallowed.
- Communicate the appropriate steps to be taken if a hazard occurs. Due to the transmission and reception properties of wireless communications, data occasionally can be lost or delayed.

Please review the following guidelines for safe and responsible battery use.

- Do not disassemble or open, crush, bend or deform, puncture, or shred.
- Do not modify or remanufacture, attempt to insert a foreign object into the battery, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard.
- Only use the battery for the system for which it was specified.
- Only use the battery with a charging system that has been qualified with the system per this standard. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- Do not short circuit a battery or allow a metallic or conductive object to contact the battery terminals.
- Replace the battery only with another battery that has been qualified with the system per this standard. Use of an unqualified battery may present a risk of fire, explosion, leakage, or other hazard.
- Promptly dispose of used batteries in accordance with local regulations.
- Battery usage by children should be supervised.
- Avoid dropping the Jetpack or battery. If the Jetpack or the battery is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.
- Improper battery use may result in a fire, explosion, or other hazard.

6

Glossary

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- **1X** — Internet at 1/10 the speed of EV-DO.
- **3G** — Third Generation. 3G refers to the third generation of mobile telephony technology.
- **4G LTE** — Fourth Generation. 4G LTE refers to the fourth generation of mobile telephony technology.
- **802.11 (b, g, n)** — A set of WLAN communication standards in the 2.4, 3.6 and 5 GHz frequency bands.
- **bps** — Bits per second. The rate of data flow.
- **Broadband** — High-capacity high-speed transmission channel with a wider bandwidth than conventional modem lines. Broadband channels can carry video, voice, and data simultaneously.
- **CDMA** — Code Division Multiple Access. It is the underlying channel access method used by some mobile phone standards.
- **DHCP** — Dynamic Host Configuration Protocol. Software found in servers and routers that automatically assigns temporary IP addresses to clients logging into an IP network.
- **DHCP Server** — A server or service with a server that assigns IP addresses.
- **DNS** — Domain Name System. A system for converting host names and domain names into IP addresses on the Internet or on local networks that use the TCP/IP protocol.
- **EV-DO Rev 0** — CDMA EV-DO Rev. 0 is a leading-edge wireless technology with higher data rates and higher system capacity. It is a fully backward compatible standard and remains interoperable with deployed EV-DO networks and devices around the world. Rev 0 provides access to mobile devices with forward link speeds of up to 2.4 Mbit/s, and reverse link speeds up to 152 kbit/s. For more information, visit www.cdg.org.
- **EV-DO Rev A** — CDMA EV-DO Rev. A is a leading-edge wireless technology with higher data rates and higher system capacity. It is a fully backward compatible standard and remains interoperable with deployed EV-DO networks and devices around the world. Rev A provides access to mobile devices with forward link speed of up to 3.1 Mbit/s, and reverse link speeds up to 1.8 Mbit/s. The increased data rates on Rev. A's physical layer enable richer applications and services. For more information, visit www.cdg.org.
- **Firmware** — A computer program embedded in an electronic device. Firmware usually contains operating code for the device.
- **Hotspot** — A Wi-Fi (802.11) access point or the area covered by an access point. Used for connecting to the Internet.
- **HTTP** — Hypertext Transfer Protocol. An application-level protocol for accessing the World Wide Web over the Internet.
- **IEEE —** Institute of Electrical and Electronics Engineers. An international technical/professional society that promotes standardization in technical disciplines.
- **IMEI** — International Mobile Equipment Identity. Used in LTE networks to identify the device. It is usually printed on the device and can often be retrieved using a USSD code.

- **IP** — Internet Protocol. The mechanism by which packets are routed between computers on a network.
- **IP Type** — The type of service provided over a network.
- **IP address** — Internet Protocol address. The address of a device attached to an IP network (TCP/IP network).
- **ISP** — Internet Service Provider. Also referred to as the service carrier, an ISP provides Internet connection service. (***See*** Network Operator)
- **Kbps** — Kilobits per second. The rate of data flow.
- **LAN** — Local Area Network. A type of network that lets a group of computers, all in close proximity (such as inside an office building), communicate with one another. It does not use common carrier circuits though it can have gateways or bridges to other public or private networks.
- **MAC Address** — Media Access Control. A number that uniquely identifies each network hardware device. MAC addresses are 12-digit hexadecimal numbers. This is also known as the physical or hardware address.
- **Mbps** — Megabits per second. The rate of data flow.
- **MSID** — Mobile Station IDentifier. A number for a mobile phone that identifies that phone to the network. These numbers are carrier specific.
- **Network Operator** — The vendor who provides your wireless access. Known by different names in different regions, some examples are: wireless provider, network provider, and service provider.
- **Network Technology** — The technology on which a particular network provider's system is built; such as CDMA or EVDO.
- **Port** — A virtual data connection used by programs to exchange data. It is the endpoint in a logical connection. The port is specified by the port number.
- **Port Forwarding** — A process that allows remote devices to connect to a specific computer within a private LAN.
- **Port Number** — A 16-bit number used by the TCP and UDP protocols to direct traffic on a TCP/IP host. Certain port numbers are standard for common applications.
- **PRL** — Preferred Roaming List. A list that your wireless phone or device uses to determine which networks to connect with when you are roaming. (Network operator specific).
- **Protocol** — A standard that enables connection, communication, and data transfer between computing endpoints.
- **Proxy** — A firewall mechanism that replaces the IP address of a host on the internal (protected) network with its own IP address for all traffic passing through it.
- **Router** — A device that directs traffic from one network to another.
- **SIM** — Subscriber Identification Module. Found in LTE and GSM network technology, the SIM is a card containing identification information for the subscriber and their account. The SIM card can be moved to different devices.
- **SSID** — Service Set IDentifier. The name assigned to a Wi-Fi network.

- **TCP/IP** — Transmission Control Protocol/Internet Protocol. The set of communications protocols used for the Internet and other similar networks.
- **USB** — Universal Serial Bus. A connection type for computing device peripherals such as a printer, mobile modem, etc. USB connectors may be used for data transfer or charging.
- **USB Port Types** — The USB ports on computers and hubs have a rectangular Type A socket, and peripheral devices have a cable with a Type A plug. Peripherals that do not have an attached cable have a square Type B socket on the device and a separate cable with a Type A and Type B plug. Ports and connectors are available in different sizes (for example, standard, mini, and micro).
- **VPN** — Virtual Private Network. A secure private network that runs over the public Internet. Commonly used to connect to an office network from elsewhere.
- **WCDMA** — Wideband Code Division Multiple Access. Anair interface standard found in 3G mobile telecommunications networks. The most-commonly used member of the UMTS family.
- **WWAN** — Wireless Wide Area Network. A public network that extends beyond architectural, geographical, or political boundaries (unlike a LAN, which is usually a private network located within a room, building, or other limited area).
- **Wi-Fi** — Wireless Fidelity. Any system that uses the 802.11 standard developed and released in 1997 by the IEEE.
- **Wi-Fi Client** — A wireless device that connects to the Internet via Wi-Fi.
- **WPA/WPA2** — Wi-Fi Protected Access. A security protocol for wireless 802.11 networks from the Wi-Fi Alliance.